REFERENCE

JULY 30, 1962
Volume 8 Number 2

SCIENCE

erial Dept.
AUG 1 2 1962

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
NESS AND DEFENSE SERVICES ADMINISTRATION
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
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BUSINESS AND DEFENSE SERVICES ADMINISTRATION
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Use of funds for printing this publication approved by the Director of the Bureau of the Budget, November 22, 1961

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UNITED STATES DEPARTMENT OF COMMERCE
BUSINESS AND DEFENSE SERVICES ADMINISTRATION
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

Volume 8, Number 2 Pages 87 - 190 July 30, 1962

*Descriptors marked with an asterisk are included in the subject index.

BIBLIOGRAPHY

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS.
June 62, 325p.
Order from GPO $12.00/year

This index is a record of the publications in languages spoken in the Soviet Union currently received by the Library of Congress and a group of cooperating libraries. It consists of three parts: Part A lists monographic literature published after 1944, with the title in the original language preceded by its English translation; Part B lists periodicals published after 1946; Part C constitutes a subject guide to both the monographs and periodical articles listed in Parts A and B.

AGRICULTURE

Evseenko, V.
FOREST SHELTERBELTS IN THE IRTYSH RIVER REGION. 4p. MTWL: 1072.
Order from OTS or ETC $1.40 62-26023

Trans. of Selskoe Khozyaistvo Kazakstana (USSR) 1958, no. 1, p. 83-84.

DESCRIPTORS: *Agriculture, *Trees, Shelters, Belts, Snow, *Moisture.

Gal'tsov, A. P.
CLIMATIC INTERACTION BETWEEN IRRIGATED AND NON-IRRIGATED AREAS (O Klimaticheskom Vzaimodeistvii Oroshaemykh i Neoroshaemykh Ploshchadei). [1962] [18]p.
Available on loan from SLA 62-10462

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Geograficheskaya, 1953, no. 3, p. 11-20.

DESCRIPTORS: *Irrigation systems, Soils, Moisture, *Climatic factors, Evaporation, Evapotranspiration, *Agriculture, Meteorology, Deserts, Hydrology.

Garnaud, M., ed.
ADVANCES IN HORTICULTURAL SCIENCE AND ITS APPLICATIONS. Nov 61, approx. 1650p. in 3 vols.
Order from PP $42.00/set of 3 v.

Trans. of mono. International Horticultural Congress (no. 15) held at Nice, France. Proceedings

DESCRIPTORS: *Soils, *Agriculture, *Organic materials, Biochemistry, Fertility.

Lebedevich, N. F.
WATER REGIME IN PEAT AND SWAMP SOILS IN THE BELORUSSIAN SSR AND CROP YIELDS. 1961, 60p. 22 refs. PL-480 Agr.
Order from OTS $0.50 60-51054

Trans. from A[kademiya] N[avuk] BSSR [Minsk]. Instytut Meliyaratsyi, Vodnai i Balotnai [Haspadarki. Trudy]. 1956, v. 6.

DESCRIPTORS: *Soils, *Swamps, Peat, Agriculture, *Water, *Drainage, Cereals, Growth, Fertility, Plants

Świetochowski, Boleslaw.
SCIENCE AND SCIENTISTS IN THE WROCLAW AGRICULTURAL COLLEGE IN THE PAST AND IN THE FUTURE. 1 Nov 61 [13]p. JPRS: 10871.
Order from OTS or SLA $1.60 62-19510

Trans. of Nauka Polska, 1961 [v. 9] no. 1(33) p. 59-70.

DESCRIPTORS: *Agriculture, Universities, Scientific research, Scientific personnel, Poland

Vlasyuk, P. A.
THE UKRAINIAN ACADEMY OF AGRICULTURAL SCIENCES AT THE PERIOD BETWEEN TWO CONGRESSES OF THE CPSU. 7 Mar 62 [12]p. JPRS: 12887.
Order from OTS or SLA $1.60 62-23332

Trans. of Vestnik Sel'skokhozyaistvennoi Nauki (USSR) 1961, v. 6, no. 10, p. 9-17.

DESCRIPTORS: *Agriculture, Production, Labor, Costs, Scientific research.

Animal Husbandry

AGREEMENT CONCERNING COOPERATION IN THE FIELD OF VETERINARY AFFAIRS. 23 Oct 61 [12]p. JPRS: 10594.
Order from OTS or SLA $1.60 62-19725

Trans. from Monatshefte für Veterinärmedizin (East Germany) 1961, v. 16, no. 7.

DESCRIPTORS: *Veterinary medicine, East Germany, Economics, Public health, *Animal industry, Diseases

THE PROPOSED LAWS ON VETERINARY AFFAIRS AND ON THE ORGANIZATION AND MANAGEMENT OF LIVESTOCK BREEDING. 14 Feb 62 [30]p. JPRS: 12513.
Order from OTS or SLA $2.60 62-19793

Trans. of Monatshefte fur Veterinärmedizin (East Germany) 1961, v. 16, no. 19, appendix p. 1-12.

DESCRIPTORS: *Veterinary medicine, *Animal industry, Reproduction, Agriculture.

A., S. and P., D.
VETERINARY SERVICE IN YUGOSLAVIA. 27 Dec 61 [23]p. 6 refs. JPRS: 11696.
Order from OTS or SLA $2.60 62-19708

Trans. of Jugoslovenski Pregled (Yugoslavia) 1961 [v. 5] July/Aug, p. 321-325 (73-77).

DESCRIPTORS: *Veterinary medicine, *Inhibition, *Diseases, *Animals, Food *Public health, Cattle, Reproduction, Artificial insemination.

Chisleanu, Gr. and Fodor, I.
THE DEVELOPMENT OF ANIMAL PRODUCTION DURING THE PEOPLE'S DEMOCRATIC REGIME. 16 Oct 61 [13]p. JPRS: 10573.
Order from OTS or SLA $1.60 62-19525

Trans. of Probleme Zootehnice si Veterinare (Rumania) 1961, v. 11, no. 5, p. 3-9.

DESCRIPTORS: *Animal industry, Production, Economics, Agriculture, Rumania.

Klimov, N. M., Malakhov, A. G., and Isaenko, E. P.
PURIFICATION OF THE VIRUS OF SWINE PLAGUE BY THE ELECTROPHORETIC METHOD (Ochistka Virusa Chumy Svinei Metodom Elektroforeza). 2 Nov 61, 10p. 7 refs. Trans. V-1743.
Order from OTS or SLA $1.10 62-13464

Trans. of Vsesoyuznyi Institut Eksperimental'noi Veterinarii. Trudy (USSR) 1959, v. 22, p. 195-201.

DESCRIPTORS: *Virus diseases, Purification, *Swine, Plague, *Electrophoresis

It was established that in electrophoretic separation of virus-containing serum proteins, the virus of swine plague migrates together with the globulin fractions of blood sera. By the method of electrophoresis it is possible to obtain preparations of the virus of swine plague purified from albumins of blood sera. (Author)

Nevenic, V., Sibalic, S., and Simic, C.
COMBATING CATTLE PIROPLASMOSIS IN KLADOVO DISTRICT BY ERADICATION OF TICKS [AND] OUR EXPERIENCE IN THE THERAPY OF BABESIOSES IN CATTLE AND SHEEP WITH BERENIL (Borba Protiv Piroplazmoze Goveda u Kljuckom Srezu Putem Unistavanja Krpelja [and] Nasa Iskustva u Lecenju Babezioza Goveda i Ovaca Berenilom) tr. by Simeon Pribicevic. 1962, 16p. 19 refs. PL-480 Agr.
Order from OTS $0.50 60-21624

Trans. of Veterinarski Glasnik (Yugoslavia) 1954, v. 8, no. 10, p. 623-631 and Acta Veterinaria (Yugoslavia) 1956, v. 6, no. 2, p. 3-13.

DESCRIPTORS: *Veterinary medicine, Cattle, Sheep, *Plasmodium, Diseases, *Countermeasures, Therapy, Ticks, Hexachlorocyclohexanes, *Insecticides.

An insecticide substance derived from HCH, produced by Chemical Industries "Zorka" from Sabac, in the concentration of 15 to 30 mg % of pure gamma isomer, killed all developing stages of ticks on cattle very effectively. The first live ticks were found on the animals 3 days after spraying. It was shown in the field that cattle sprayed every 7 days with this solution during the piroplasmosis season can be protected from this disease. (Nevenic and Cvetkovic) Within the past two years a new preparation (manufactured at Hoechst's Industries in Frankfurt-on-Main) known under the name of berenil was made available for the use of veterinarians for combating babesioses and trypanosomiases. The effect of berenil on babesidae was investigated on 169 sheep and 150 cattle during 1955. Treatment of sheep for the most part was carried out with one dose of 3 mg per kg bodyweight, given intramuscularly, although some of them were treated with single doses of 1.25 mg, 12.5, 15 and 30 mg. One dose of 3 mg of berenil per kg of body weight most often brings about clinical recovery in 13 to 29 hours but not the complete disappearance of parasites from the body of the treated animal.

Rislakki, V.
TRIP OF THE DELEGATES OF THE FINNIS VETERINARY SCIENCE INSTITUTE TO THE USSR. 7 Mar 61 [12]p. (4 photos. omitted). JPRS: 6883.
Order from OTS or SLA $1.60 62-19346

Trans. of Suomen Eläinlääkärilehti (Finland) 1960, v. 66, no. 9, p. 499-510.

DESCRIPTORS: *Veterinary medicine, *Medical personnel, Finland

Tempel, E.
EXPERIENCES IN PREVENTIVE VETERINARY MEDICINE AS APPLIED TO POULTRY RAISING. 9 Jan 62 [13]p. JPRS: 11861.
Order from OTS or SLA $1.60 62-19732

Trans. of Monatshefte für Veterinärmedizin (East Germany) 1961, v. 16, no. 11, p. 433-437.

DESCRIPTORS: *Veterinary medicine, *Preventive medicine, East Germany, *Chickens, Diseases, Agriculture

Terent'ev, F. A. and Shchurevskii, V. E.
ALL-UNION INSTITUTE OF EXPERIMENTAL VETERINARY MEDICINE DURING THE 40 YEARS OF THE EXISTENCE OF THE SOVIET REGIME (Vsesoyuznyi Institut Eksperimental'noi Veterinarii za 40 Let Sushchestvovaniya Sovetskoi Vlasti). 5 Feb 62, 32p. (5 figs. omitted). Trans. V-1764.
Order from OTS or SLA $3.60 62-23285

Trans. of Vsesoyuznyi Institut Eksperimental'noi Veterinarii. Trudy (USSR) 1959, v. 23, p. 29-48.

DESCRIPTORS: *Veterinary medicine, Animal industry, Diseases, Pathology.

Thamm, H.
SIXTY YEARS OF SERVICE IN PREVENTIVE HEALTH PROTECTION FOR MAN AND ANIMAL. 8 Jan 62 [8]p. JPRS: 11851.
Order from OTS or SLA $1.10 62-19730

Partial trans. (some sections summarized) of Monatshefte für Veterinärmedizin (East Germany) 1961, v. 16, no. 11, p. 428-433.

DESCRIPTORS: *Preventive medicine, *Public health, *Animal industry, Diseases, Infections, *Veterinary medicine, Man, Food, Milk, Meat.

Vyshelesskii, S. N.
FROM THE PAST OF THE VETERINARY-BACTERIOLOGICAL LABORATORY OF THE MINISTRY OF INTERNAL AFFAIRS (Iz Proshlogo Veterinarno-Bakteriologicheskoi Laboratorii Ministerstva Vnutrennikh Del). 21 Feb 62, 18p. (1 fig. omitted) 3 refs. Trans. V-1766.
Order from OTS or SLA $1.60 62-23286

Trans. of Vsesoyuznyi Institut Eksperimental'noi Veterinarii. Trudy (USSR) 1959, v. 23, p. 49-58.

DESCRIPTORS: *Veterinary medicine, *Biological laboratories, Animal industry, Microbiology.

Zablotskii, M. A. and Yurgenson, P. B.
STATE REGISTER (PEDIGREE) OF AUROCHS AND BISONS (PUREBLOOD, PUREBRED AND HYBRIDS) VOL. I, tr. by S. Blondheim and R. Etinger. 1962, 95p. 25 refs. PL-480 Int.
Order from OTS $1.00 61-31055

Trans. of mono. Gosudarstvennaya Plemennaya Kniga Zubrov i Bizonov (Chistokrovnykh, Chistoporodnykh i Gibridnykh) v. 1, Moscow, 1956 [116p].

DESCRIPTORS: *Cattle, *Reproduction, *Genetics, Standards.

The book consists of four sections. The first lists purebred aurochs, descendants of wild aurochs belonging to the species Bison bonasus L., which inhabited the Belovezh Forest (Brest Region, Belorussian SSR) and the mountain forests of the northwestern Caucasus (Krasnodar Territory, RSFSR) as early as the first quarter of this century. The second section contains data on the origin of pureblood bisons from a representative of the same genus, Bison, as aurochs, but related to another species, Bison bison L. The third section deals with hybrids from matings of aurochs to large horned-cattle, and the fourth with interspecific hybrids from mating bison with large horned-cattle. (Author)

Plant Cultivation

PEST CONTROL IN THE SOVIET UNION. 16 Feb 62 [48]p. JPRS: 12665.
Order from OTS or SLA $4.60 62-19755

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1961 [v. 6] no. 2, p. 8-11, 33-37, 48-56.
Other trans. of p. 11, 33-37, 51-56 are available from OTS or SLA as 61-23194 ($1.10) 61-23199 ($1.60) and 61-27490 ($2.60).

DESCRIPTORS: *Pest control, Agriculture, *Plants, *Insect control, Conferences, *Poisons, Mercury compounds, *Forests, *Seeds, *Disinfectants, USSR.

Contents:
Zonal coordination conferences, by I. M. Belyaev and others
Prospects for the use of systemic poisons in gardens, by T. N. Polevoi and others
Tashkent station of plant protection, by S. Kh. Bondarenko
Mercury-containing preparations in agriculture, by P. P.
Volume of aviation-chemical operations has increased threefold, by D. G. Gutrov
Seed dressers, by K. S. Mushnikova
International conference on plant quarantining and protection (no. 10) by I. A. Churaev and L. N. Zotsenko.

THE SIGNIFICANCE OF VEGETATIVE HYBRIDISATION FOR THE FORMATIVE PROCESSES IN PLANTS OF SOLANUM LYCOPERSICUM. [1960] [27]p. 3 refs. M 2129.
Order from SLA $2.60 61-13624

Trans. of unidentified article, n.p., n.d.

DESCRIPTORS: *Potatoes, *Mutations, Plants

Blinkova, M. V.
SCIENTIST-PLANT BREEDER (BORIS P. SOKOLOV) (Uchenyi-Selektsioner). 29 Nov 61, 14p. Trans. A-1317.
Order from OTS or SLA $1.60 62-23293

Trans. of Vestnik Sel'skokhozyaistvennoi Nauki (USSR) 1961 [v. 6] no. 5, p. 137-140.

DESCRIPTORS: *Plants, *Corn, *Genetics, Seeds, Growth, Agriculture, Pollen, Fertility.

Karaseva, E. F.
ROLE OF FOLIAR SUPPLEMENTARY POTASSIUM FEEDING IN THE PROTECTION OF WHEAT AGAINST LEAF RUST (Rol' Vnekornevoy Kaliynoy Podkormki v Zashchite Pshenitsy ot Buroy Rzhavchiny). 10 Jan 60, 4p. Trans. A-1231.
Order from OTS or SLA $1.10 61-15819

Trans. of Vsesoyuznyi Institut Zashchity Rastenii. Trudy (USSR) 1958, v. 13, p. 62-63.

DESCRIPTORS: *Wheat, *Rusts, Plants, Infections, Resistance, *Potassium.

Investigations showed that potassium foliar supplementary feeding of winter wheat contributes toward an increase in plant resistance to leaf rust infection and decreases the viability of fungal uredospores.

Kovachevski, Iv.
THE 25TH ANNIVERSARY OF THE CENTRAL SCIENTIFIC RESEARCH INSTITUTE FOR PLANT PROTECTION IN BULGARIA. 19 Dec 61 [7]p. JPRS: 11586.
Order from OTS or SLA $1.10 62-19614

Trans. of Bulgarska Akademiia na Naukite, Sofia. Spisanie, 1961, v. 6, no. 1, p. 95-98.

DESCRIPTORS: *Agriculture, Scientific organizations, *Plants, *Pest control, Diseases, Countermeasures, Bulgaria.

Psareva, E. N.
DEVELOPMENTAL STAGES OF TOBACCO (O Stadiinom Razvitii Tabaka) tr. by M. Slade. [1962] [9]p. (foreign text included) 17 refs. CSIRO Trans-5000.
Order from OTS or SLA $1.10 61-15974

Trans. of [Byulleten' Tekhniko-Ekonomicheskoi Informatsii] (USSR) 1956, no. 2, p. 11-16.

DESCRIPTORS: *Tobacco, Growth, Seeds, Plants, Phase studies, Temperature, Light.

Most of the tobacco varieties recommended for the various regions of the USSR develop well with a day length of 14 to 15 hours. Some varieties react well to a longer day. For instance, American 572 develops considerably faster when kept in the light continuously (natural light by day and electric illumination at night). Vernalization of tobacco seed at low temperatures fails to yield the requisite reliable effect. Tobacco will only pass through the vernalization stage at temperatures of +20 to +30°C. With most tobacco varieties the stage of vernalization is fairly long, continuing beyond the planting-out time. The conditions that are best for tobacco growth are also best for its development; completion of the vernalization stage and transition to the light stage of development takes place at a certain point of the growth processes, when a sufficiently large assimilating leaf surface (usually more than half) area has been formed. The vernalization stage of the investigated tobacco varieties is fairly long under natural growing conditions. Transition from the vernalization stage to the light stage is rapid.

Remezov, N. P.
CONFLICTING PROCESSES AS A BASIS FOR THE GENETIC DEVELOPMENT OF SOILS (Protivopolozhnye Protsessy kak Osnova Geneticheskogo Razvitiya Pochv). 1962, 29p. 3 refs. PL-480 Agr.
Order from OTS $0.50 61-11499

Trans. of Pochvovedenie (USSR) 1932, no. 2, p. 178-211.

DESCRIPTORS: *Soils, *Classification, Minerals, Fertilizers, Dams, Drainage, Geology, Forestry.

Sidorov, F. F.
COLLECTION OF SELF-POLLINATED CORN VARIETIES OF DUTCH AND SOUTH-EUROPEAN ORIGIN (Kollektsiya Samoopylennykh Linii Gollandskogo i Yuzhnoevropeiskogo Proiskhozhdeniya). 26 Mar 62. Trans. A-1334.
Order from OTS or SLA $1.10 62-23855

Trans. of Kukuruza (USSR) 1961, v. 6, no. 10, p. 60-61.

DESCRIPTORS: *Corn, *Pollen, Selection, Growth, Reproduction, Seeds, Climatic factors.

Simonet. Marc and Guinochet, Marcel
MORPHOLOGICAL AND KARYOLOGICAL ANOMALIES IN YOUNG PLANTLETS CAUSED BY HALOGEN DERIVATIVES OF CYCLIC CARBIDES, tr. by F. H. B. 14 Oct 58, 5p. 4 refs.
Order from OTS or SLA $1.10 59-12096

Trans. of Société de Biologie [et de ses Filiales. Comptes Rendus des Séances] (France) 1939, v. 131, p. 222-224.

DESCRIPTORS: *Plants, Wheat, Flax, Growth, Mitosis, Morphology, Histology, *Cells (Biology), Physical chemistry, *Halogens, *Carbides, Chlorides, Toluene, Nitro radicals, Nitrobenzene, Colchicine, Toxicity.

Starostin, S. G.
DAS FLUGWESEN IM DIENSTE DES PFLANZENSCHUTZES (Aviatsiya na Zashchite Rastenii) (Aviation Serving Plant Protection). 9p. MTWL: 1074 (text in German).
Order from OTS or ETC $1.55 62-26025

Trans. of Zashchita Rasteniĭ ot Vrediteleĭ i Bolezneĭ (USSR) 1960, v. 10, p. 1-3.
Another trans. is available in English from OTS or SLA $1.10 as 62-13424, JPRS-11008, 6 Nov 61 [7]p. and from LC or SLA mi$1.80, ph$1.80 as 61-15831, 6 Jan 61, 8p.

DESCRIPTORS: Plants, *Airplanes, *Insecticides.

Terekhova, N. A.
CONDITIONS IN WHICH ABUTILON MAY RECOVER FROM INFECTIOUS CHLOROSIS. II. RECOVERY UNDER THE INFLUENCE OF DEFOLIATION.
[1961] 8p. (2 figs. omitted) 7 refs.
Order from OTS or SLA $1.10 62-13938

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 614-618.

DESCRIPTORS: *Plants, *Virus diseases, *Therapy, Growth, Regeneration.

Freeing diseased Abutilon plants from symptoms of variegation was brought about both as a result of successive removal of variegated leaves and the development of wholly green shoots from individual basal buds. Plants freed from variegation could not infect healthy plants on grafting. However, they themselves were again readily infected by diseased plants. (Author)

Voros, Jozsef.
HUNGARIAN RESULTS IN THE USE OF ANTIBIOTIC FUNGICIDES FOR PLANT PROTECTION.
13 Dec 61 [8]p. JPRS: 11529,
Order from OTS or SLA $1.10 62-19547

Partial trans. (some parts summarized) of Magyar Kemikusok Lapja (Hungary) 1961, v. 16, no. 4, p. 156-159.

DESCRIPTORS: *Plants, *Fungicides, *Antibiotics, Agriculture, Hungary.

ASTRONOMY

Bakulin, P. I., ed.
ASTRONOMICAL ALMANAC FOR THE YEAR 1958.
[1961] [368]p. 184 refs. ACIC RR-1.
Order from OTS or SLA $21.00 62-15569

Trans. of Astronomicheskii Kalendar': [Peremennaya Chast'] (USSR) 1958, v. 61.

DESCRIPTORS: *Astronomical data, Air almanacs

Astrophysics

Barbier, Daniel,
THE 6300 RAY OF THE NOCTURNAL ATMOSPHERIC LUMINESCENCE (Recherches sur la Raie 6300 de la Luminescence Atmospherique Nocturne) tr. by J. Hardy. [1960] [81]p. (foreign text included)
31 refs. CSIRO Trans. no. 4737.
Order from OTS or SLA $8.10 60-17772

Trans. of Annales de Geophysique (France) 1959, v. 15, no. 2, p. 179-216.

DESCRIPTORS: *Night sky, *Twilight, *Luminescence, Sky brightness, Intensity, Measurement, Aurorae, *Photometers, Dissociation, Recombination reactions, Spectrographic analysis.

This analysis of the conditions governing the emission of the 6300 ray shows that several distinct causes of emission are involved: (1) the twilight emission by radiative dissociation; (2) the radiative electronic recombination; (3) the process leading to the matutinal geomagnetic phenomenon; and (4) the process causing the bursts at low latitudes. This list should also include the auroral emissions, classical auroras and red auroras, these latter being frequent at a geomagnetic latitude as low as 45° (Author)

Gurzadyan, G. S.
DAS "MONDINTERFEROMETER" (The "Lunar" Radio Interferometer"). (text in German).
Order from T.I.B. $1.55

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 118, p. 1094-1097.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 59-20192 [1959] 8p.

DESCRIPTORS: *Radio interferometers, Radio astronomy, Radio waves, Ionosphere, Moon.

BEHAVIORAL SCIENCES

Personnel and Training

BIOGRAPHIES OF SOVIET SCIENTISTS. 14 Mar 62
[50]p. JPRS: 13007.
Order from OTS or SLA $4.60 62-23424

Trans. of 23 selected biographical articles from various Russian periodicals.

DESCRIPTORS: *Medical personnel, *Scientific personnel.

Contents: A. B. Aleksandrovskii, A. A. Bagdasarov, A. A. Chaika, F. I. Fedorov, M. Ya. Gekhtman, S. M. Gitman, E. I. Gordon, N. V. Kantorovkh, S. I. Karnatsevich, A. P. Konikov, N. N. Korganov, A. P. Kotov, V. A. Nikolaev, P. S. Novikov, K. G. Renard, S. N. Savenko, A. A. Smorodintsev, N. D. Strazhesko, A. P. Terent'ev, V. M. Treer, B. I. Trusyevich, A. Tryb, I. M. Vinogradov.

HUNGARIAN KOSSUTH-PRIZE WINNING SCIENTISTS FOR 1960 (Ezert Kaptak Kossuth Dijat). 11 Sep 61 [7]p. JPRS: 10096.
Order from OTS or SLA $1.10 62-19570

Trans. of Nepszabadsag (Hungary) 1961 [v. 19] no. 69, p. 7.

DESCRIPTORS: *Scientific personnel, Personnel, *Hungary, Man, Nervous system, Body temperature, Blood circulation, Buildings, *Temperature control, Control.

NEW ACADEMICIANS, FOREIGN MEMBERS, AND CORRESPONDING MEMBERS ELECTED TO THE BULGARIAN ACADEMY OF SCIENCES. 26 May 61 [8]p. JPRS: 4651.
Order from OTS or SLA $1.10 62-19228

Trans. from Narodna Armiya (Bulgaria) 1961, v. 17, no. 3851, p. 1 and 3.

DESCRIPTORS: *Scientific organizations, Scientific personnel, Personnel, *Bulgaria.

NEW NATIONAL DIRECTORATE AND PRESIDIUM OF THE HUNGARIAN ASSOCIATION OF SOCIETIES OF TECHNOLOGY AND NATURAL SCIENCES. 25 May 61 [8]p. JPRS: 8332.
Order from OTS or SLA $1.10 62-19223

Trans. of Muszaki Elet (Hungary) 1960, v. 15, no. 26, p. 4.

DESCRIPTORS: *Scientific organizations, Presidents, *Scientific personnel, Personnel, *Hungary.

REPORT OF THE SLOVAK POSTGRADUATE MEDICAL INSTITUTE: PROGRAM AND PERSONALITIES (Zpravy zo SUDL). 5 June 61 [23]p. JPRS: 9351.
Order from OTS or SLA $2.60 62-19225

Trans. of Lekarsky Obzor (Czechoslovakia) 1961, v. 10, no. 1, p. 51-59.

DESCRIPTORS: *Medical personnel, Czechoslovakia, Medicine, Education, Training.

TRAINING OF ASSISTANT DOCTORS IN RUMANIAN METHODOLOGICAL CENTERS (Prefatirea Medicilor Secundari in Centrele Metodologice). 8 Mar 61 [17]p. JPRS: 7393.
Order from OTS or SLA $1.60 62-19201

Trans. of Muncitorul Sanitar (Rumania) 1960, v. 11, no. 32[532] p. 4.

DESCRIPTORS: *Medical personnel, Training, Rumania, Education.

F., M. I.
YUGOSLAV DOCTORATE DEGREE IN SCIENCE AND DOCTORAL DISSERTATIONS IN 1959-60. 1 Aug 61 [31]p. 360 refs. JPRS: 8670.
Order from OTS or SLA $3.60 62-19700

Trans. of Jugoslovenski Pregled (Yugoslavia) 1961 [v. 5] no. 2, p. 73-80.

DESCRIPTORS: *Scientific personnel, Personnel, *Education, Theses, *Yugoslavia.

Golanski, Henryk.
DEVELOPMENT OF A FUTURE CADRE OF SCIENTISTS (Dzis i Jutro Kadr Naukowych). 24 Apr 61 [13]p. JPRS: 9096.
Order from OTS or SLA $1.60 62-19324

Trans. of Nowe Drogi (Poland) 1961, v. 15, no. 2, p. 108-114.

DESCRIPTORS: *Scientific personnel, Poland, Training, *Education.

R., J.
ROCKET AND ASTRONAUTIC TECHNOLOGY CLUB FORMED IN POLAND (Powstal Klub Techniki Rakietowej i Astronautyki). 3 Jan 61 [5]p. JPRS: 7370.
Order from OTS or SLA $1.10 62-19297

Trans. of Przeglad Techniczny (Poland) 1960, no. 38, p. 6.

DESCRIPTORS: *Rockets, *Astronautics, Engineering personnel, Scientific personnel, Personnel, *Scientific organizations, *Poland.

Terplan, Zeno.
BULLETIN OF THE TECHNICAL UNIVERSITY OF HEAVY INDUSTRY, VOL III [BOOK REVIEW] (A Nehezipari Muszaki Egyetem Kozlemenyei, III. Kotet). 8 Mar 61 [6]p. JPRS: 7907.
Order from OTS or SLA $1.10 62-19233

Trans. of Magyar Tudomanyos Akademia Muszaki Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 25, no. 1/4, p. 404-405.

DESCRIPTORS: Universities, Personnel, Periodicals, Theses, *Hungary, *Scientific reports, Scientific personnel.

Psychology

EXPERIMENTAL STUDY OF THE RULES AND REGULATIONS OF WORK OF THE CEREBRAL CORTEX: SELECTED ARTICLES. 14 Mar 62 [148]p. 155 refs. JPRS: 12969
Order from OTS or SLA $11.00 62-23455

Trans. of mono. Eksperimental'noe Izuchenie Zakonomernostei Raboty Kory Bol'shnikh Polusharii, Moscow, 1960, p. 14-69, 103-145, 162-170, 186-192

DESCRIPTORS: *Cerebral cortex, *Conditioned reflex, Inhibition, Rabbits, Man, Sound, Light, Brain, Analysors (Psychology), Direct current, Reaction time, Food, Excitation, Dogs, Physiology, Stimulation

Contents:

A study of local electrical phenomena in the cerebral cortex in connection with the elaboration of conditioned reflexes and internal inhibition, by G. I. Shul'gina

A study of the significance of rhythmic processes in the cerebral cortex of rabbits during the extinction of conditioned reflexes, by T. A. Korol'kova

Conditioned-reflex reorganization of cortical rhythm in man by the combination of sound with rhythmic light, by R. A. Pavlygina and V. S. Rusinov

Electrical activity of the cortex, thalamus, hypothalamus and reticular formation of the brain stem of the rabbit from combination of sound with rhythmic light, by R. A. Pavlygina

Creation of a dominant focus in the motor analyzer with a pulsating direct current, by R. A. Pavlygina and R. A. Pozdnyakova

Slow electrical processes in the rabbit cerebral cortex during the formation of an association in time, by T. B. Shvets

The problem of the interaction of food and defense conditioned reflexes, repts. 1-2, by L. A. Preobrazhenskaya

The problem of the interaction of excitatory and inhibitory processes, rept. 1, by P. M. Volkova

A characterization of the excitatory process in the cerebral cortex of the dog with heterogeneous conditioned reflexes, by U. G. Gasanov

The physiological role of an external stimulus concurrent with action leading to the removal of food, by E. I. Plonskaya.

Borisova, M. K.

THE EFFECT OF NOISE ON THE CONDITIONED REFLEX ACTIVITY OF ANIMALS, tr. by Crawford. [1961] [10]p. 2 refs.
Order from OTS or SLA $1.10 62-13893

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Deyatel['nosti] (USSR) 1960, v. 10, no. 6, p. 908-912.

DESCRIPTORS: *Noise, *Reaction (Psychology), Animals, Inhibition, *Conditioned reflex, Cerebral cortex.

Noise of 85-db intensity produced signs of defensive, protective inhibition in the cerebral cortex of white rats, which expressed itself in reduction of conditioned reflexes, prolongation of their latent period and disappearance of conditioned reflexes. The disturbance of conditioned reflex activity produced by noise depended on the typological features of higher nervous activity. In animals classed as having strong types of higher nervous activity the change in conditioned reflex activity developed after exposure to noise for six hours, and increased gradually. Noise produced much more pronounced changes in higher nervous activity even after the first exposures for two and four hours in animals with weak types of nervous system; the 6-hour exposure led to complete loss of all conditioned reflexes. When albino rats were rested for five days after exposure to noise, their conditioned reflex activity returned to normal. (Author)

Gavrilova, L. N.

THE INFLUENCE OF A UNILATERAL LATENT FOCUS OF EXCITATION ON THE COURSE OF UNCONDITIONED AND CONDITIONED ALIMENTARY REFLEXES, tr. by R. Crawford. [1961] [11]p. 9 refs.
Order from OTS or SLA $1.60 62-13897

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Deyatel['nosti] (USSR) 1960, v. 10, no. 6, p. 869-873.

DESCRIPTORS: *Excitation, Dogs, *Conditioned reflex, Stimulation, Reaction (Psychology), Inhibition, Secretion, Salivary glands, *Reflexes, Food, *Digestive system

Georgiev, F. I.

THE PROBLEMS OF THE SENSORY AND THE RATIONAL IN COGNITION. [1961] 18p. 25 refs.
Order from OTS or SLA $1.60 62-15048

Trans. of Voprosy Filosofii (USSR) 1955, no. 1, p. 28-41.

DESCRIPTORS: *Sensory perception, *Reasoning, Brain, Analysers (Psychology)

Gidikov, A. A.

CORRECTING MECHANISMS IN RELATION TO SOME MOTOR CONDITIONED REACTIONS IN MAN, tr. by R. Crawford. [1961] [16]p. (5 figs. omitted) 12 refs.
Order from OTS or SLA $1.60 62-13900

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Deyatel['nosti] (USSR) 1960, v. 10, no. 6, p. 814-820.

DESCRIPTORS: *Neuromuscular transmission, Man, *Conditioned reflex, Signals, *Reaction (psychology), Stimulation, Motor reactions.

Experimental findings point to certain physiological mechanisms whereby a motor reaction of man may assume the quantitative characteristics of a number of their external properties from conditioned stimuli having these same properties (path, duration in time, speed). Signals serving as feed-back in motor conditioned reactions of man are important for the formation of these reactions. These signals became the conditioned stimuli for correcting reflexes which rectified every deviation from the objective set by the verbal instructions and the connexion between, which was of chain character.

Kasatkin, N. I.
EARLY CONDITIONED REFLEXES IN THE CHILD [Rannie Uslovnye Refleksy Rebenka]. [1961] [13]p. 14 refs.
Order from OTS or SLA $1.60 62-13788

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1952, v. 2, no. 4, p. 572-581.
Another trans. is available from SLA as RT-2323.

DESCRIPTORS: *Conditioned reflex, *Infants, Growth, *Physiology, Cerebral cortex, Auditory perception, Proprioception.

Auditory and visual conditioned reflexes were established in two infants. The auditory conditioned reflex was firmly established at the beginning of the second month of life. In another child, an alimentary digestive reflex to light did not acquire the same degree of constancy as the auditory conditioned reflex in the first child. Auditory and proprioceptive, palpebral conditioned reflexes were developed in the same child. The auditory conditioned reflex was constant by the 33rd day. The proprioceptive conditioned reflex was not firmly established at the end of the second month. Differentiation of similar stimuli was studied in two infants. A stable differentiation was achieved in one child at about 5 months and in the other at six months. From these and a review of literature, the following conclusions were made. Auditory conditioned reflexes are the earliest to develop. Conditioned reflexes occur in a definite succession, and at different times after birth. Stable conditioned reflexes with effector expression develop at the end of the first or beginning of the second month of life. The speed of the development of differentiation of similar stimuli increases with age. The development of differentiation clearly reflects the individual characteristics of the child's cortical neurodynamics.

Kleint, Herbert.
EXPERIMENTS CONCERNING PERCEPTION (CONCLUSION). PERCEPTION AND BODY (Versuch über die Wahrnehmung (Schluss)). [1961] [67]p. 60 refs.
Order from SLA $6.60 61-14829

Trans. of Zeitschr[ift] f[ür] Psychol[ogie und Physiologie der Sinnesorgane. Abt. 1: Zeitschrift für Psychologie] (Germany) 1940, v. 149, p. 31-82.

DESCRIPTORS: *Space perception, *Visual perception, *Sensory perception, Visual acuity, Eye, Physiology, Vision, Stimulation, Posture, Psychometrics.

Reimov, R.
SOME FEATURES OF THE HIGHER NERVOUS ACTIVITY OF GOPHERS UNDER NATURAL CONDITIONS, tr. by R. Crawford. [1961] [12]p. 11 refs.
Order from OTS or SLA $1.60 62-13905

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Detatel['nosti] (USSR) 1960, v. 10, no. 6, p. 903-907.

DESCRIPTORS: Rodents, Physiology, *Brain, *Cerebral cortex, Vision, *Motor reactions, *Analyzers (Psychology), Conditioned reflex, Neuromuscular transmission.

Findings point to the comparatively rapid formation of temporary connections from the visual and motor analysers in gophers in nature, provided that the surroundings are relatively constant during the period of the experiment.

Samsonova, V. G.
SOME ADDITIONS TO THE METHODS FOR INVESTIGATION OF THE HIGHER NERVOUS ACTIVITY OF ADULT MAN, tr. by R. Crawford. [1961] [12]p. (3 figs. omitted) 10 refs.
Order from OTS or SLA $1.60 62-13904

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Deyatel['nosti] (USSR) 1960, v. 10, no. 6, p. 809-813.

DESCRIPTORS: *Nervous system, *Cerebral cortex, Physiology, Neuromuscular transmission, Reflexes, *Reaction (Psychology).

Certain additions to the speech reinforcement motor method of Ivanov-Smolenskii are examined. Reference here is to the use of (1) electromyographic recording of the motor response, (2) fine differential stimuli and (3) statistical treatment of the experimental material. These supplementary techniques can also be used in relation to other methods for the investigation of the higher nervous activity of man. (Author)

Vartanyan, G. A. and Menitskii, D. N.
A METHOD FOR THE STUDY OF MOTOR DEFENSIVE CONDITIONED REFLEXES IN FISHES WITH RECORDING OF THE MAGNITUDE OF THE MOTOR CONDITIONED REACTIONS, tr. by R. Crawford. [1961] [9]p. (3 figs. omitted) 5 refs.
Order from OTS or SLA $1.10 62-13907

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Deyatel[nosti] (USSR) 1960, v. 10, no. 6, p. 918-921.

DESCRIPTORS: *Fishes, *Motor reactions, *Conditioned reflex, Neuromuscular transmission, Test methods.

A modification is presented of the motor defensive method that affords accurate recording of the latent period of the conditioned reaction and the magnitude of the work performed by the animal during the period of action of the conditioned stimulus alone.

BIOLOGICAL SCIENCES

CANDIDATES FOR ACTING MEMBERS OF THE ACADEMY OF MEDICAL SCIENCES USSR. 6 Mar 62 [10]p. JPRS: 12888.
Order from OTS or SLA $1.10 62-23346

Trans. from Meditsinskii Rabotnik (USSR) 1962 [v. 25] no. 4(2064) p. 4.

DESCRIPTORS: *Medical personnel, Biology, Scientific research, Medicine.

CYTOLOGY, 1961, VOL. 3, NO. 4. 26 Jan 62 [213]p. refs. JPRS: 12195.
Order from OTS or SLA $14.50 62-15682

Trans. of Tsitologiya (USSR) 1961, v. 3, no. 4, p. 376-500.

DESCRIPTORS: *Histology, Ionization, Radiation effects, Cells (Biology), Electron microscopy, *Ticks, *Urethanes, *Muscles, Plants, Radiation injuries, Chromosomes, *Salmon, *Rats, Embryos, Spinal cord, Ecology, *Silkworms, Sea water, Salinity, Kidneys, *Ethylenimines, Seeds, *Autoradiography, *Yeasts, Tissues (Biology), Conferences.

Contents:
The localized effect of ionizing radiation on cellular components, by A. L. El'darov and N. N. Rott
Comparative electron microscopic investigation of the nucleolar structure of argasid tick spermatocytes, by Yu. L. Goroshchenko and V. F. Mashanskii
Cytological characteristics of the free-living stages of polypodium hydriforms, by E. V. Raikova
Changes in the degree of dispersion of colloidal particles of nerve cell protoplasm under the influence of solutions of quinine sulfate, egg albumin and urethane, by S. V. Levin
Comparison of the Thermostability of the protein substrate of tonic and tetanic skeletal muscle fibers, by V. P. Ushakov
Change in the thermostability of plant cells after the brief effect of high temperature, by A. G. Lomagin
Radiation injuries to chromosomes at early stages of development of the salmon, by A. A. Prokof'eva-Bel'govakaya
Functional-cytochemical study of sensory and motor cells of rat embryo spinal cord, by L. B. Levinson and M. I. Leikina
Some controversial problems of cytoecology, by B. P. Ushakov
The chromosome complex of the Shanghai race of the wild silkworm, by M. D. Golysheva
The thermostability of lugworm cells in relation to the temperature of the habitat, by Yu. N. Gorodilov
The effect of sea water salinity on the thermostability of actinia ciliated epithelium, by I. N. Dregol'skaya
Hiato-chemical study of the distribution of succinic dehydrogenase in the kidney, by K. A. Zufarov and others
Cytogenic effect of ethylenimine on seeds of wheat, onion and horse beans, by N. N. Zoz
The utilization of liquid emulsions for the purpose of obtaining autoradiographs with H^3-Thymidine and C^{14}adenine, by L. N. Zhinkin and others
Synchronization of budding in yeasts, by A. I. Golub
Normal and pathological submicroscopic structures of cells and tissues. Their physiological and pathogenetic significance, by A. Policard and C. Baud; book review, by A. M. Karpas and V. F. Mashanskii
Some trends of cytological research in the United States, by A. S. Troshin
Scientific Conference on Problems of Experimental Study and Clinical Testing of Dimesol, by M. A. Rozin.

Shkol'nik, M. Ya. and Maevskaya, A. N.
MORPHOLOGICAL CHANGES IN SUNFLOWER AS A RESULT OF BORON DEFICIENCY, tr. by Lydia Venters. Sep 61 [8]p. 37 refs.
Order from OTS or SLA $1.10 AEC-tr-4796

Trans. of Nauchnye Doklady Vysshei Shkoly. [Biologicheskie Nauki] (USSR) 1961, no. 1, p. 143ff.

DESCRIPTORS: *Plants, Growth, Soils, Morphology, *Boron, Deficiency diseases.

As a result of boron deficiency, plants developed mo morphological variations and incision of leaves.

Tarasov, N. I.
SCIENTIFIC NOTES OF THE ODESSA BIOLOGICAL STATION, 1959, VOL. 1: REVIEW. 8 Aug 61 [6]p. JPRS: 9852.
Order from OTS or SLA $1.10 61-27673

Trans. of unidentified mono., n.p., n.d. (review of Odes'ka Biologichna Stantsiya. Naukovi Zapysky (USSR) 1959, v. 1, 159p.).

DESCRIPTORS: *Marine biology, Biology, *Black Sea.

Zavadskii, K. M.
CONCERNING THE WORK OF THE DARWINISM DEPARTMENT (O Rabote Kafedry Darvinizma). 27 Mar 62, 10p. Trans. A-1337.
Order from OTS or SLA $1.10 62-23858

Trans. of Leningrad U. Vestnik (USSR) 1961 [v. 16, no. 21]. Seriya Biologii, no. 4, p. 153-155.

DESCRIPTORS: *Genetics, *Universities, Research methods, *Scientific personnel, Training, Students.

Anatomy and Physiology

HEMATOLOGY CONFERENCE IN HUNGARY, 7-9 DEC 61: PROGRAM. 19 Feb 62 [14]p. JPRS: 12675
Order from OTS or SLA $1.60 62-19781

Trans. of Orvosi Hetilap (Hungary) 1961, v. 102, no. 48, p. 2300-2302.

DESCRIPTORS: *Hematology, Conferences, Hungary, Blood.

LIFE SUPPORT SYSTEMS: SOVIET LITERATURE. Monthly rept. no. 9 on AID Work Assignment no. 22. 28 Feb 62 [24]p. 9 refs. AID rept. 62-28.
Order from OTS or SLA $2.60 62-24493

DESCRIPTORS: *Space medicine, *Physiology, Radiobiology, *Laboratory animals, Bone, Growth, Inhibition radium, Therapy, Radiation sickness, Radiation injuries, Immunization, Serum, Radioprotective drugs, Drugs, Pathology, Geography, Microbiology, Brain, X-rays, Canavanine, Rabbits, Motor reactions, Rats, Testes, *Radiation effects, Literature.

Ameniya, Ikusaku.
EFFECT OF GILL EXCISION ON SEX DETERMINATION IN THE OYSTER, OSTREA GIGAS THUNBERG, tr. by T. B. Kurata. 1960, 2p. FRBC Trans. series no. 294.
Order from NRCC mi$0.50, ph$1.50 NRCC C-3523

Abstract trans. of [Nihon] Gakujutsu Kyokai Ho[koku] (Japan) [1935] v. 10, no. 4, p. 1023-1026.

DESCRIPTORS: *Oysters, Marine biology, *Excision, *Respiratory system, *Sex, Nutrition.

Donhoffer, Sz., Mestyan, Gy. and others.
EFFECTS OF LESIONS OF THE EPITHALAMUS ON THE METABOLISM AND BODY TEMPERATURE OF RATS, AND COMPARISON WITH THE BEHAVIOUR AFTER LESIONS OF THE HYPOTHALAMUS (Über die Wirkungen von Epithalamusläsionen auf Umsatz und Körpertemperatur der Ratte und Deren Vergleich mit dem Verhalten nach Läsionen des Hypothalamus) tr. by M. Slade. [1960] [28]p. (foreign text included) 24 refs. CSIRO Trans. no. 4617.
Order from OTS or SLA $2.60 60-17782

Trans. of Acta Physiologica (Hungary) 1959, v. 15, no. 2, p. 161-177.

DESCRIPTORS: Rats, *Physiology, *Brain, Hypothalamus, Behavior, Injuries, Metabolism, *Body temperature, *Hyperthermia.
A high percentage of electrolytic lesions of the epithalamus of rats were followed by disturbances of the metabolism and of the body temperature. The frequency and combination of the individual disturbances yield a syndrome characteristic for epithalamic lesions and different from that of hypothalamus lesions. The most important differences as compared with hypothalamic lesions are: (a) far more frequent absence of hyperthermal intensification of the metabolism, (b) less frequent association of an intensified basal metabolism with a feverish rise in the body temperature, (c) absence of a drop in the basal metabolism to subnormal values, (d) mostly normal body temperature in a 20 - 22°C ambient, even in the absence of chemical regulation, and (e) no disturbance of the chemical regulation without simultaneous absence of hypothermal intensification of the metabolism.

Erdmann, W. D., Heye, D., and Jungmann, H.
DILATION OF THE ABDOMINAL AORTA AND DYNAMICS OF THE CIRCULATION. [1961] 7p. (3 figs. omitted) 5 refs.
Order from SLA $1.10 62-10711

Trans. of Deutsch[e] Ges[ellschaft] f[ur] Kreislaufforschung. Verhandl[ungen] (West Germany) 1956, v. 22, p. 113-117.

DESCRIPTORS: *Aorta, *Blood pressure, *Heat, Autonomic nervous system, Reaction (Psychology), *Nerves, Reflexes, Stimulation.

In experiments on anesthetized cats and dogs the aorta was isolated for brief periods of time (clamped off) and exposed to artificial pressure variations. It was shown thereby that cardiac dynamics react to circulatory relations in the aorta. The adequate stimulus could not, however, be specifically determined. From the pharmacological effects and from preliminary observations on the aorta artificially supplied from a donor animal, it was concluded that the reflex tract runs through the spinal cord. (Author)

Komarova, T. F.
ON THE USE OF SODIUM BROMIDE FOR TESTING THE STRENGTH OF THE INHIBITORY PROCESS IN DOGS, tr. by R. Crawford. [1961] [18]p. (4 figs. omitted) 11 refs.
Order from OTS or SLA $1.60 62-13902

Trans. of #Zh[urnal] Vyssh[ei] Nervn[oi] Deyatel['nosti] (USSR) 1960, v. 10, no. 6, p. 884-891

DESCRIPTORS: *Nervous system, Physiology, Inhibition, Conditioned reflex, Dogs, *Sodium compounds, *Bromides.

In tests for nervous system types the administration of single doses of bromide to dogs does not reveal the exact strength of the inhibitory process. (Author)

Krylova, N. V.
CERTAIN RULES OF MORPHOLOGY OF THE EFFERENT VESSELS OF THE VISCERAL LYMPH NODES IN THE ABDOMINAL CAVITY IN MAMMALS. [1962] 10p. 49 refs.
Order from RIS $20.00 RIS C-182

Trans. of Arkhiv Anatomi [Gistologii i Embriologii (USSR) 1959, v. 37, no. 10] p. 67-73.

DESCRIPTORS: *Mammals, *Abdomen, *Lymphatic system, Blood vessels, Morphology, Anatomy.

Miyakoshi, Hitoshi.
HEREDITY IN THE SECRETORY AND NON-SECRETORY TYPE OF TYPE-SPECIFIC AGGLUTININS IN SALIVA, tr. by W. Himel. Pt. 3 of the Serological Constitution of Man from the Standpoint of Iso-agglutinins in Saliva. 17 Sep 59, [21]p. 17 refs.
Order from OTS or SLA $2.60 59-19435

Trans. of Nihon Hoigaku Zasshi (Japan) 1951, v. 5, no. 6, p. 94-100.

DESCRIPTORS: *Hemagglutinins, Blood, *Saliva, *Secretion, Antigens, Antibodies, *Genetics.

Miyakoshi, Hitoshi.
PROPERTIES OF ANTI-A AGGLUTININ IN SALIVA BY WAY OF COMPARISON WITH THAT IN SERUM, tr. by William Himel. Pt. 2 of the Seriological Constitution of Man from the Standpoint of Iso-agglutinins in Saliva. 11 Sep 59, 26p. 38 refs.
Order from OTS or SLA $2.60 59-19434

Trans. of Nihon Hoigaku Zasshi (Japan) 1951, v. 5, no. 6, p. 85-93.

DESCRIPTORS: *Blood, *Antibodies, *Antigens, Salivary glands, Secretion, Hemagglutinins, Physiology, *Saliva.

We investigated the characteristics of anti-A agglutinin in saliva and compared them with those of anti-A agglutinin in serum. The results were as follows. Anti-A agglutinin in serum was classified as α_{11} which was completely adsorbed by AS-type human saliva and α_1 which was not completely adsorbed and of which a part remained. Anti-A agglutinin in saliva was all completely adsorbed by AS-type human saliva, and there was not a single case in which a part remained. When anti-A agglutinin in saliva was adsorbed by A $A^{\dagger}$ -type rabbit saliva or $A^{\dagger}$ type goat saliva, there were cases in which a part remained and cases in which it was completely adsorbed. Those results did not correspond with the results in which serum was adsorbed by $A^{\dagger}$ -type rabbit saliva or $A^{\dagger}$ -type goat saliva. However, they did correspond when we diluted the serum until the value became the same as the saliva agglutination value. When anti-A agglutinin in serum was adsorbed with $A^{\dagger}$ -type dog blood corpuscles, it could be divided into serum with antibodies to $A^{\dagger}$ -type dog blood corpuscles and serum without them. Marked individual differences were observed, depending on the serum. (Author) (See also 59-19287)

Miyakoshi, Hitoshi.
THE SECRETORY TYPE WHICH SECRETES TYPICAL AGGLUTININS INTO THE SALIVA AND THE NONSECRETORY TYPE WHICH DOES NOT SECRETE THEM, tr. by William Himel. Pt. 1 of the Serologic[al] Constitution of Man from the Standpoint of Iso-agglutinins in Saliva. 8 Sep 59, 36p. 12 refs.
Order from OTS or SLA $3.60 59-19287

Trans. of Nihon Hoigaku Zasshi (Japan) 1951, v. 5, no. 6, p. 75-84.

DESCRIPTORS: *Blood, *Hemagglutinins, Salivary glands, Secretion, *Saliva, Quantitative analysis, Antigens, *Antibodies.

Unlike the agglutinin in the type substance of blood corpuscles and in the serum of the same individual, the type-specific agglutinin in the saliva corresponding to the type substance of the blood corpuscles of that individual was not always present. Cases in which agglutinin was not secreted in the saliva, i.e. the nonsecretory type, constituted 20 to 25% for each type -- A, B, and O. This had absolutely no connection with the secretory type (S-type) and the nonsecretory type (s-type) of type substance. For the s-type, there were cases in which agglutinin was secreted in the saliva; and, for the S-type, there were cases in which agglutinin was not secreted in the saliva. Next, the agglutination values in saliva were compared with the agglutination values in serum. For the nonsecretory type of agglutinin in saliva, the agglutination values of the serum were not necessarily limited to low ones. Although few, high values did exist. For the secretory type of agglutinin with higher than intermediate agglutinin values, however, the serum agglutination values were intermediate or higher in all cases, and low values did not appear. Although the anti-A and anti-B agglutination values differed in O-type saliva, they did not always differ in the serum. The average agglutination values for saliva were 1/24 those for serum. (Author)

Morii, N.
PROTHROMBIN, FACTOR V AND FACTOR VII COMPLEX IN FULL-TERM AND PREMATURE INFANTS. Pt. 1 of Studies of Prothrombin Complex in Full-term and Premature Infants. [1962] 12p.
Order from ATS $25.25 ATS-16N57J

Trans. of Nihon Shonika Gakkai Zasshi (Japan) 1961, v. 65, no. 2, p. 260-267.

DESCRIPTORS: *Prothrombin, *Infants.

Nielubowicz, Jan, Folga, Jozef, and Wieckowska, Wanda.
THE BIOELECTRIC ACTIVITY OF THE INTESTINE (ELECTROENTEROGRAPHY). 21 Feb 61 [17]p. 2 refs. JPRS: 6789.
Order from OTS or SLA $1.60 62-19313

Trans. of Polski Tygodnik Lekarski, 1960, v. 15, no. 31, p. 1077-1083.

DESCRIPTORS: *Bioelectronics, *Intestine, Physiology, Electroencephalogy, Medical equipment, *Muscles, *Stimulation, *Reaction(Psychology), Pathology, Diagnosis.

Ohmura, Yasuo, Kawamata, Mizuo, and Oshima, Masamitsu, eds.
SPACE MEDICINE 24 June 59 [7]p. 2 refs. AF 1255899.
Order from OTS or SLA $1.10 59-18432

Summary trans. of mono. Uchu Igaku, Tokyo, 1959, 292p.

DESCRIPTORS: *Space medicine, Literature, Abstracting.

The summary translation consists of the title of the book, the preface, the table of contents, which lists 20 chapters by 37 authors, and the translation of 2 Japanese reference titles.

Ribeiro, Luiz P., Mitidieri, E., and Affonso, O. R.
PAPER ELECTROPHORESIS: A REVIEW OF METHODS AND RESULTS, tr. by C. Cole, 1961, 463p.
Order from D. Van Nostrand Co., Inc., 120 Alexander St., Princeton, N. J.

Trans. of unidentified Portuguese mono., n. p., n. d.

DESCRIPTORS: Paper, *Electrophoresis, Test methods, Tests.

Roffo, A. H.
SURVIVAL OF TISSUES AFTER THE DEATH OF THE INDIVIDUAL: CHECK UPS IN TWENTY-THREE DAYS (la Sobrevida de los Tejidos Despues de la Muerte del Sujeto; su Comprobacion hasta Veintitres Dias) tr. by Tatiana Boldyreff. 16 Oct 59, 28p. (51 illus. omitted).
Order from OTS or SLA $2.60 59-22174

Trans. of Inst[ituto] de Med[icina] Exper[imental] para el Estud[io] y Trat[amiento] del Cancer. Bol[etin] (Argentina) n.d., v. 3, p. 118-175.

DESCRIPTORS: *Tissues (Biology), Cells (Biology), Viability, Growth, Reproduction, Physiology, Life expectancy.

Sheivekhman, B. E.
SOUND DISCRIMINATION BY THE DEAFMUTE CHILD PRACTICALLY DEPRIVED OF ALL HEARING (Analiz Zvuka Glukhonemym Rebenkom Prakticheski Lishennym Slukha). [1961] 7p. 10 refs.
Order from OTS or SLA $1.10 62-15318

Trans. of Akademiya Nauk SSSR. Fiziologicheskii Institut. Trudy, 1949, v. 4, p. 113-116.

DESCRIPTORS: *Children, *Deafness, *Pitch discrimination, *Speech disorders, Hearing.

Deafmute children with practically no hearing possess the ability to analyze sound stimuli perceived for the first time. This ability is demonstrated clearly when, with the assistance of appropriate aids, such children are exposed to speech stimuli within the limits of their hearing range. (Author)

Smirnov, M. S.
DISPOSITION OF THE COLOR PERCEPTION RECEPTORS IN THE HUMAN FOVEA (Rapoloshenie Tsvetovosprinimayushchikh Priemnikov v Fovea Cheloveka) tr. by Tatiana Boldyreff. 27 Nov 61, 8p. 7 refs.
Order from OTS or SLA $1.10 62-13484

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1955, v. 103, no. 3, p. 427-429.

DESCRIPTORS: *Eye, Physiology, *Color vision, Photoreceptors, Colors, Stimulation, Vision.

The human fovea contains red, green and blue receptors. The theory of the three types of cones is in error. In this manner, the cone is a cell that may be simultaneously in several states of stimulation which vary in quality.

Biochemistry

STUDIES IN SOVIET NUTRITION. 28 Feb 62 [31]p. 61 refs. JPRS: 12837.
Order from OTS or SLA $3.60 62-23396

Trans. of Voprosy Pitaniya (USSR) 1961, v. 20, no. 6, p. 3-11, 18-22, 67-70.

DESCRIPTORS: *Nutrition, *Milk, *Food, *Antibiotics, *Proteins, *Amino acids, Biochemistry, Ion exchange resins.

Contents:
Effect of KU-1 cation exchange resin treatment of cow's milk on several hygienic indices of such milk, by A. V. Bogolyubova
The hygienic evaluation of food products treated with antibiotics, by Yu. I. Rubinshtein
Ways of increasing the biological activity of protein hydrolysates, by Yu. N. Kremer and A. A. Shmidt.

Alikhanyan, S. I.
A STUDY OF THE LETHAL MUTATIONS IN THE LEFT END OF THE SEX-CHROMOSOME IN DROSOPHILA MELANOGASTER (Izuchenie Letal'nykh Mutatsii v Levom Kontse Polovoi Khromosomy u Drosophila Melanogaster). 1962, 33p. 29 refs. PL-480 HEW.
Order from OTS $0.50 61-31006

Trans. of Zoologicheskii Zhurnal (USSR) 1937, v. 16, no. 2, p. 247-278.

DESCRIPTORS: *Genetics, *Mutations, *Drosophila, *Chromosomes, Sex, Growth, *Reproduction.

We obtained 22 lethal and 1 sterile mutation in the left end of the X-chromosome by means of X-rays. The region of the studied chromosome was confined by the size of deletion D 215 and was of 0.2±-0.3± units. Only 8 lethals proved to be allelic. The 23 mutations involved only 18 loci. All lethals were localized by means of different deletions and on the basis of cytologic and genetic (allelism) data. Some 23 mutations and 7 deletions were studied cytologically by Painter's method. Out of 22 mutations only 10 were connected with chromosomal aberrations. Among them were: 8 minute aberrations, 1 translocation and 1 large inversion. The dimensions of 7 deletions were established. Cytologic analysis of lethal 15 showed the absence of the so-called "bulbus". A new case of viability gene is described. The gene is localized on 0.2±-0.3± units. It is connected with a deficiency in the left end of the X-chromosome. Its left break has occurred between the zero and the first band. The right break was on the right doublet of the bulbus. The possible number of mutations was established on the basis of data based on repeated mutations with the aid of Muller's formula. This number amounts to 47. On extrapolating the data on the left end of the whole chromosome, by using the comparative mutation rate, we obtain a total number for the X-chromosome equal to 1,231. (Author)

Bel'govskii, M. L.
DEPENDENCE OF THE FREQUENCY OF MINUTE CHROMOSOME REARRANGEMENTS IN DROSOPHILA MELANOGASTER UPON X-RAY DOSAGE (Zavisimost' Chastoty Melkikh Perestroek Khromosom u Drosophila Melanogaster ot Dozy X-Luchei). 1962, 14p. 25 refs. PL-480 HEW.
Order from OTS $0.50 61-11484

Trans. of Akademiya Nauk SSSR. Izvestiya. [Seriya Biologicheskaya] 1939 [no. 2] p. 159-170.

DESCRIPTORS: Genetics, *Mutations, *X-rays, *Chromosomes, *Drosophila, Reproduction.

The frequency of minute chromosome rearrangements in Drosophila melanogaster, as determined by the frequency of yellow "mutations" in the sc^8 chromosome, varies approximately proportionally to X-ray dosage, its dependence upon the dosage thus showing no significant difference from that of lethal mutations. This fact suggests that either the vast majority of lethals are due to minute chromosome rearrangements, or that the mechanism of point mutations is essentially similar to that of minute rearrangements. It must be assumed that the mechanisms of minute and gross chromosome rearrangements are essentially different. The assumed similarity of the dependence of minute rearrangement and of point mutation frequencies upon X-ray dosage suggests that the relative frequency of these two kinds of genetic changes in nature must be the same as in X-ray experiments and hence the frequency of minute rearrangements in nature must be fairly high. (Author)

Golubev, T. I.
PRACTICAL METHOD OF OBTAINING ENZYMATIC PROTEIN HYDROLYSATES FOR TISSUE CULTURES. [1961] [10]p. (2 figs. omitted) 18 refs.
Order from OTS or SLA $1.10 62-13950

Trans. of #Vorp[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 629-632.

DESCRIPTORS: Tissues (Biology), Culture media, *Enzymes, *Proteins, Hydrolysis, *Amino acids.

Hiyama, Yoshio, comp.
BIOCHEMICAL STUDIES WITH STRONTIUM-90, CESIUM-137 AND OTHERS. Rept. no. 11, 1959, on Program no. 9117. Feb 61. 39p.
Order from OTS $0.75 AEC-tr-4245

Trans. of unidentified mono. pub. by [Nihon] Gakujutsu Shinkokai [Japan Society for the Promotion of Science] 1960, p. 79-93.

DESCRIPTORS: *Biochemistry, *Strontium, *Cesium, Water, Soils, Plants, *Cerium, *Ruthenium, Milk, Bone, Man, Biophysics.

Contents:
Biological, geological and chemical studies on Sr^{90} and Cs^{137} in fresh-water regions, by Takahisa Nakaya
The amount of Sr^{90} in the soil collected in Hokkaido, by Mitsufumi Abe
The uptake of Sr and Cs by crop plants and their distribution in the crop plant body, by Shingo Mitsui
The determination of Sr^{90}, Ru^{106}, Cs^{137} and Ce^{144} in tea leaves, by Takanobu Shiokawa and Masuo Yagi
Determination of the concentration of Sr^{90} in milk products, by Yukichi Tsugo
The concentration of Sr^{90} in several places in the Saitama Prefecture, by Morito Chiba
The content of Sr^{90} in human bones (cases from the Osaka Prefecture), by Yasushi Nishiwaki et al.
The relationship between the uptake of Sr^{90} and the bones of Japanese, by Y. Hiyama et al.
The tendency of Sr^{90} concentration to increase in the biosphere, by Y. Hiyama and T. Asari

Kasab'ian, S. S.
HISTOCHEMISTRY OF ASCORBIC ACID IN HUMAN PLACENTA AT DIFFERENT PERIODS OF PREGNANCY (Gistokhimiya Askorbinovoi Kisloty v Chelovecheskoi Platsente v Raznye Sroki Beremennosti) [1961] 4p. (2 figs. omitted).
Order from OTS or SLA $1.10 62-15342

Trans. of Akusherstvo i Ginekologiya (USSR) 1956, v. 32, no. 2, p. 3-5.

DESCRIPTORS: *Pregnancy, *Ascorbic acid, Fetal membranes, Women, Cells (Biology), Chemistry.

Krylov, O. A.
RELATIONSHIP BETWEEN CHANGES IN HIGHER NERVOUS ACTIVITY AND THE BROMINE CONTENT OF THE BLOOD IN MONKEYS (PAPIO HAMADRYAS) IN THE COURSE OF ONTOGENESIS. [1961] [11]p. (3 figs. omitted) 23 refs.
Order from OTS or SLA $1.60 62-13785

Trans. of #Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1958, v. 8, no. 3, p. 358-365.

DESCRIPTORS: *Primates, *Blood, *Bromine, *Nervous system, Conditioned reflex, Physiology, Hormones, Enzymes

The bromine content of the blood in monkeys (Papio hamadryas) changed. From the first few days of life to the age of 2.5 months the blood concentration ranged from 0.9 to 1.2 mg per 100 ml (average 1.0 mg). From the second month or slightly later, the bromine content of the blood and the range of its fluctuation gradually increased, the limits being 0.6 to 2.4 mg (average 1.5 mg). In adult animals the blood concentration fell to 0.9 to 1.8 (average 1.2 mg). When the blood content of bromine was raised to a certain level, the degree of expression of the orientation-investigatory reaction and of conditioned reflex activity in the course of ontogenesis attained a development which approximated in character to the higher nervous activity of the adult animal. During the period of high content (from the age of 2.5 months to 5 years) increased motor activity of the animal, generally in the form of play activity, was noted. The beginning of this period coincided with the gradual separation of the infant monkey from the mother. The relationship of the changes in the bromine content of the blood with the character of the reflex activity suggests the existence of different bromine compounds (organic, combined in hormones, enzymes, etc., and inorganic bromine), which have different actions in physiological processes.

Medvedeva, G. B. and Nechaev, I. A.
HEREDITARY CHANGES OF PHYSIOLOGICAL CHARACTERISTICS IN DROSOPHILA MELANOGASTER (Nasledstvennye Izmeneniya Fiziologicheskikh Priznakov u Drozofily). 1962, 13p. 9 refs. PL-480 HEW.
Order from OTS $0.50 61-11474

Trans. of Akademiya Nauk SSSR. Institut Genetiki. Trudy, 1950, v. 18, p. 247-259.

DESCRIPTORS: *Genetics, *Drosophila, Food, *Silver compounds, Nitrates, Mutations, *Fertility, Growth, Reproduction.

Feeding of larvae and adult Drosophila melanogaster flies for a number of generations on food containing silver nitrate led to heritable changes expressed in the acquisition of higher resistance to the changed environment, i.e. in a considerable decrease in sensitivity to the latter, and in the inheritable change in fertility of the experimental insects. As a result of feeding, the resistance of the flies to silver nitrate (0.003-0.062%), increased tenfold. After a number of generations on the experimental medium, their fertility decreased. Upon subsequent transfer to normal food, the inheritance of the changed fertility in the various lines takes place in different manners. In laboratory lines 3 (white-eyed) and 116 (with curled wings), a "contrast" type of genetic transmission was observed: after their transfer to normal food, they gave a higher fertility than the control. In the following generations, the increased fertility was maintained in line 3 up to the second generations, and in line 116--to the fifth generation. The inbred line 44 transmitted its low fertility after transfer to normal food in a stable fashion ("direct inheritance" type). Only from the eleventh generation onward did the differences between this line and the control begin to disappear. When the fertility of experimental line 44 became equal to that of the control, it was again tested on a silver-containing food, where it showed a significantly higher fertility than that of the control. (Author)

Myasnikova, I. A.
THE EFFECT OF ASCORBIC ACID AND VITAMIN A ON THE DEVELOPMENT OF EXPERIMENTAL CHOLESTEROL ATHEROSCLEROSIS (Vliyanie Askorbinovoi Kisloty i Vitamina a na Razvitie Eksperimental'nogo Kholesterinovogo Ateroskleroza). 4 Jan 62 [7]p. NIH no. 1-23-61.
Order from OTS or SLA $1.10 62-15795

Trans. of Akademiya Meditsinskikh Nauk SSSR. Trudy, 1952, v. 20, p. 103-107.

DESCRIPTORS: *Ascorbic acid, *Vitamin A, *Cholesterol, *Arteriosclerosis.

Prokof'eva-Bel'govskaya, A. A.
A CYTOLOGICAL STUDY OF THE BREAKS AT THE WHITE LOCUS OF THE X-CHROMOSOME IN DROSOPHILA MELANOGASTER (Tsitologicheskoe Izuchenie Razlomov X-Khromosomy Drosophila Melanogaster v Raione Lokusa White). 1962, 13p. 11 refs. PL-480 HEW.
Order from OTS $0.50 61-11483

Trans. of Akademiya Nauk SSSR. Izvestiya. [Seriya Biologicheskaya] 1939, no. 2, p. 215-227.

DESCRIPTORS: *Genetics, *Drosophila, *Chromosomes, *Mutations, Reproduction, Morphology, Physiology.

The investigation shows that for mottled to occur it is not necessary that the X-chromosome break at a definite point near the white locus.

Prokof'eva-Bel'govskaya, A. A.
A CYTOLOGICAL STUDY OF THE "SIMPLE BREAKS" IN THE INERT REGION OF THE SCUTE$_8$ CHROMOSOME OF DROSOPHILA MELANOGASTER (Tsitologicheskoe Izuchenie "Prostykh Razryvov" v Inertnom Raione X-Khromosomy Drosophila Melanogaster). 1962, 11p. 8 refs. PL-480 HEW.
Order from OTS $0.50 61-11482

Trans. of Akademiya Nauk SSSR. Izvestiya. [Seriya Biologicheskaya] 1939 [no. ?] p. 349-361.

DESCRIPTORS: *Histology, *Chromosomes, Morphology, *Genetics, Reproduction, *Drosophlia, Mutations.

The data presented here indicate that there are no "simple breaks" in the inert regions, i.e. interstitial genes cannot become terminal. (Author)

Prokof'eva-Bel'govskaya, A. A.
INERT REGIONS IN THE INNER PART OF THE X-CHROMOSOME OF DROSOPHILA MELANOGASTER (Inertnye Raiony Vnutrennikh Chastei X-Khromosomy Drosophila Melanogaster). 1962, 8p. 15 refs. PL-480 HEW.
Order from OTS $0.50 61-11481

Trans. of Akademiya Nauk SSSR. Izvestiya. [Seriya Biologicheskaya] 1939 [no. 2] p. 362-370.

DESCRIPTORS: *Genetics, *Chromosomes, *Drosophila, Salivary glands, Anatomy, Mutations, *Morphology.

Studies revealed the presence of inert regions in seven segments of the X-chromosome: 2B, 3C3, 3C6, 4C3-7, 11A, 12EF, 15F and 19E3-4. Obviously, these cases do not embrace all intercalary inert regions of the X-chromosome. All inert regions in salivary glands are represented by chromonemata with thin chromiole bands. The intercalary inert regions of the X-chromosome are very short, so that their attraction to one another and to the chromocentral and distal inert regions proves, as a rule, insufficient for bending the chromosome and for conjugation. For this reason, the intercalary inert regions of the chromosome are usually undetected in salivary glands. When the relative positions of chromosome segments in the nucleus are such as to facilitate synapses, they can always be observed. The presence of inert intercalary regions in the X-chromosome confers on the segments in question properties of "weak spots", because it is at these spots that the chromosome most frequently bends or breaks. (Author)

Rapoport, I. A.
THE ALKYLATION OF THE GENE MOLECULE (Alkilirovanie Gennoi Molekuly). 1962, 6p. 14 refs. PL-480 HEW.
Order from OTS $0.50 61-11478

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 59, no. 6, p. 1183-1186.

DESCRIPTORS: *Biochemistry, *Genetics, Reproduction, *Mutations, Alkyl radicals, *Azo compounds, Acetic acid, Urethanes.

Rapoport, I. A.
DERIVATIVES OF CARBAMIC ACID AND MUTATIONS (Proizvodnye Karbaminovoi Kisloty i Mutatsii). 1962, 5p. PL-480 HEW.
Order from OTS $0.50 61-11477

Trans. of Byulleten' Eksperimental'noi Biologii i Meditsiny (USSR) 1947, v. 23, p. 198-201.

DESCRIPTORS: *Biochemistry, *Genetics, Chromosomes, Mutations, Morphology, Amino acids, *Carbamates, Nucleoproteins, *Formaldehyde, Reproduction.

Rapoport, I. A.
EFFECT OF ETHYLENE OXIDE, GLYCIDOL, AND GLYCOLS ON GENE MUTATIONS (Deistvie Okisi Etilena, Glitsida i Glikolei na Gennye Mutatsii). 1962, 5p. 9 refs. PL-480 HEW.
Order from OTS $0.50 61-11479

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 60, no. 3, p. 469-472.
Another trans. is available from Science Museum Library, London as 50/2217. Apply to UKSM, Washington for details.

DESCRIPTORS: *Biochemistry, *Ethylene oxide, *Glycols, Alcohols, *Genetics, Chromosomes, Reproduction, Nucleoproteins.

Rapoport, I. A.
MUTATIONS UNDER THE INFLUENCE OF UNSATURATED ALDEHYDES (Mutatsii pod Vliyaniem Nepredel'nykh Al'degidov). 1962, 4p. 8 refs. PL-480 HEW.
Order from OTS $0.50 61-11480

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 61, no. 4, p. 713-715.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 60-15532, CSIRO Trans-4513 [1960] [7]p.

DESCRIPTORS: *Biochemistry, *Mutations, Genetics, *Chromosomes, *Reproduction, *Acroleins, Aldehydes, Propionic acids.

Rapoport, I. A.
THE OXIDATION AND THE MECHANISM OF ACTION OF MUTAGENOUS FACTORS (Okislenie i Mekhanizm Deistviya Mutagennykh Faktorov). 1962, 7p. 24 refs. PL-480 HEW.
Order from OTS $0.50 61-31008

Trans. of Zhurnal Obshchei Biologii (USSR) 1943, v. 4, no. 2, p. 65-72.

DESCRIPTORS: *Radiobiology, Genetics, *Mutations, Reproduction, X-rays, *Physiology, Iron, Ozone, Radiation effects.

On the basis of experiments on the simultaneous action of X-rays and of substances specifically enhancing the physiological action of the allotropic modification of oxygen formed in the cell, under the influence of short-wave energy, the conclusion has been reached in this paper that ozone is the chemical mediator of the X-ray effect. Combined action of X-rays and of iron leads to a positive result. The intensifying effect of iron on the mutational process cannot be explained by the biophysical theory. On the other hand, it ties up with the enhancement effect of ozone by iron found by Weyl, Rotten, and others. The chemical action of X-rays and that of activated oxygen are similar in certain respects. The disturbance of the continuity of the chromosome thread, under the influence of short-wave energy, may be compared with the disruption of ozonides at the unsaturated bond. The finding of unsaturated bonds in the chromosomal structure opens up the possibility of explaining the causes of synapsis and crossing-over as phenomena of labile polymerization and depolymerization, with peculiar regroupings of the unsaturated bonds. The very active forms of oxygen formed regularly in the process of normal metabolism may be considered as an important factor in the spontaneous mutational process. (Author)

Uno, Tsutomu, Tokunaga, Toshio, and Nakamura, Masayoshi.
CHEMICAL STUDIES ON THE BODY TISSUES OF THE SALMON, ONCORHYNCHUS KETA, AFTER SPAWNING, tr. by George Kudo. 8 Apr 60 [11]p. 10 refs. FWS Trans. no. 29 .
Order from OTS or SLA $1.60 60-19847

Trans. of [Hokkaido-ku Suisan Kenkyusho Kenkyu Hokoku] (Japan) 1956, no. 14, p. 89-95.

DESCRIPTORS: Fishes, *Salmon, Tissues (Biology), *Biochemistry

Compared with ordinary salmon, fat, protein, ash and heat-coagulable-nitrogen content were respectively lower; and moisture, water-soluble-nitrogen, and amino-nitrogen content were higher. Even in the case of spawned salmon whose body was exhausted and dorsal muscle softened, the fresh fish had a very low bacteria count and hardly any yeast. The autolysis of the muscle was more active in the case of softened muscle. The optimum pH for the autolysis was 3.6, which was lower than that for ordinary salmon. In case of spawned salmon with softened dorsal muscle, storage in 10% NaCl solution turned about 50% of the total-nitrogen into soluble-nitrogen, and in case of ordinary fish this was only 45%. The former was high in protein soluble in NaCl solution. The salted spawned salmon with softened and dissolving flesh and which was low in quality was high in soluble protein and amino acid content, low in volatile bases and volatile organic acids, and the proteinase activity was considerably higher. This fact suggests that the cause of dissolving of the flesh is due to autolysis. The ether extract of the muscle contained a high percentage of complex lipids (acetone insoluble fraction);

about 30 to 40%. One half of this fraction was crude lecithin and the remainder was crude cephalin and crude sphingomyelin plus cerebroside. (Author)

Watanabe, Masao and Arai, Masomoto.
INTERMEDIATE METABOLISM OF GLUCURONIC ACID, tr. by William Himel. 16 July 59, 22p. (10 figs. omitted) 11 refs.
Order from OTS or SLA $2.60 59-18321

Trans. of Koso Kagaku Shimpojium[u] (Japan) 1957, v. 12, p. 201-207.

DESCRIPTORS: *Glucuronic acid, Acids, *Metabolism, Enzymes, Paper chromatography, Phosphorylation, Adenosine phosphates, Biochemistry.

With the K-12 strain of E. coli which we used, contrary to expectation, it was verified that the glucuronic acid was converted to galacturonic acid before phosphorylation occurred and that it was via the metabolic pathway which will be shown below

Medical Specialties and Equipment

HUNGARY REGULATES USE OF TITLE "MEDICAL SPECIALIST". 11 Nov 60 [9]p. JPRS: 6226.
Order from OTS or SLA $1.10 62-19382

Trans. of [Magyar Tudomanyos Akademia]. Akademiai Kozlony (Hungary) 1960, v. 11, no. 15, p. 87-90.

DESCRIPTORS: Medicine, *Medical personnel, Training, *Standards, Education, Hungary.

SUMMARY OF THE ALL-UNION CONVENTION OF HYGIENISTS, EPIDEMIOLOGISTS, MICROBIOLOGISTS AND INFECTIONISTS (NO. 13) tr. by Mrs. E. F. Tourkoff. [1961] 2p.
Order from OTS or SLA $1.10 62-15302

Partial trans. of Gigiena i Sanitariya (USSR) 1956 [v. 21] no. 9, p. 3ff.

DESCRIPTORS: *Public health, Population, Vital statistics, Medical personnel

Ahcin, Marjan.
THE PRINCIPLES OF ORGANIZATION OF THE HEALTH SERVICE ACCORDING TO THE NEW LAW, ESPECIALLY WITH REGARD TO HEALTH CENTERS. 5 Dec 61 [16]p. JPRS: 11317.
Order from OTS or SLA $1.60 62-19550

Trans. of Zdravstveni Vestnik (Yugoslovia) 1961, v. 30, no. 1/2, p. 1-5.

DESCRIPTORS: *Public health, Economics, Sanitary engineering.

Borjanovic, Slovodan.
THE DISINFECTION SERVICE IN YUGOSLAVIA AND PLANS FOR ITS IMPROVEMENT. 17 Nov 61 [12]p. JPRS: 11064.
Order from OTS or SLA $1.60 62-19497

Trans. of Narodno Zdravlje (Yugoslavia) 1961, v. 17 no. 5, p. 155-158.

DESCRIPTORS: Yugoslavia, *Disinfectants, Infections, Preventive medicine, Microorganisms, *Pest control.

Hasegawa, J. and Ikeda, K.
THE DISINTEGRATION TIME OF TABLETS. Pt. 1 of Studies of Tablets. [1962] 9p.
Order from ATS $12.65 ATS-95P59J

Trans. of Yakugaku Zasshi (Japan) 1955, v. 75, no. 4, p. 359-363.

DESCRIPTORS: *Drugs, Solubility, Time.

Lah, Jerica.
BLOOD TRANSFUSION SERVICE IN YUGOSLAVIA. 31 May 61 [12]p. JPRS: 4669.
Order from OTS or SLA $1.60 62-19369

Trans. of Vojnosanitetski Pregled (Yugoslavia) 1960, v. 17, no. 10, p. 1035-1039.

DESCRIPTORS: *Blood transfusions, Blood, *Standards, Collecting methods, Distribution, Yugoslavia.

Papierkowski, Julian.
THE MODERN CONCEPTION OF THE MECHANISM OF ACTION OF MUD BATHS, PACKS, AND TAMPONS ON THE SYSTEM. Paper read at the International Congress for the General Study of Muds (no. 7) held in Frantiskovy Lazne (Franzesbad) Czechoslovakia, 15-19 Sep 60. 12 Dec 61 [9]p. JPRS: 11488.
Order from OTS or SLA $1.10 62-19545

Partial trans. (some parts summarized) of Przeglad Lekarski (Poland) 1961, ser. 2, v. 17, no. 6, p. 227-230.

DESCRIPTORS: Therapy, *Soils, *Body temperature, Metabolism.

Mud possesses a special heat-retentive quality. Baths of 10, 30, or 45 minutes are followed by a cleaning bath, after which the patient lies with or without a blanket for 1 or 2 hours. A prolonged mud bath raises the body temperature to 39°C (102.2°F) and large quantities of heat are stored in the body. A weight loss of between 300 to 900 grams (between 0.6 and 2.0 pounds) occurs for an 80 kg adult (about 175 lbs). This is caused by dehydration and by increased combustion. An increase in metabolic processes is shown by a 7% increase in expired CO_2. The haemoglobin count is increased by 3 to 9% and a distinct lymphocytosis and neutropenia occur. Increased numbers of young neutrophilic leucocytes appear. Respiration is increased. (This reflected polypnea can be

diminished by cold applications to the head or the back of the head.) Heart action is accelerated and reaches up to 130 beats/minute (because of the heating of the blood). The maximum pressure (systolic) of the blood usually drops by 5 to 10 mm of Hg at the beginning of a mud bath and minimal pressure (diastolic) always drops by about 20 mm. Histamine is absorbed from the skin into the bloodstream until the red blood cells are saturated, which causes the adrenalin in the blood to increase by 100%. This causes hyperactivity of the thyroid gland and underactivity of the pancreas.

Sherstnev, K. M.
CONCERNING THE INTER-RELATIONSHIP OF THE INSTITUTE WITH PUBLIC HEALTH INSTITUTIONS. 7 Mar 62 [6]p. JPRS: 12891.
Order from OTS or SLA $1.10 62-23323

Trans. of Vrachebnoe Delo (USSR) 1961, no. 8, p. 107-110.

DESCRIPTORS: *Public health, Medical research, Medical personnel, Preventive medicine.

Shpinev, V. F.
SCIENTIFIC-PRACTICAL CONFERENCES AS A FORM OF SHARING NEW ACHIEVEMENTS OF MEDICAL INSTITUTIONS. 6 Mar 62 [8]p. JPRS: 12890.
Order from OTS or SLA $1.10 62-23322

Trans. of Vrachebnoe Delo (USSR) 1961, no. 11, p. 151-154.

DESCRIPTORS: *Conferences, *Industrial medicine, Medical research, Preventive medicine.

Microbiology

Balandin, G. A. and Uraleva, V. S.
IMMUNOGENICITY OF THE FILTRABLE FORMS OF BRUCELLAE (Fil'truyushchiesya Formy Brutsell. Soobshchenie III. Immunogennost' Fil'truyushchikhsya Form Brutsell). Communication 3 on Filtrable Forms of Brucellae. [1961] [8]p. 9 refs.
Order from OTS or SLA $1.10 62-15006

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii] Protivochumnyi Institut. Trudy (USSR) 1956 [v. 10] p. 333-338.

DESCRIPTORS: *Viruses, Brucella, *Brucellosis vaccine, *Immunization, Mice.

In mice inoculated with the unautoclaved and the autoclaved filtrable forms of brucellae, a somewhat raised resistance to infection of them with the visible forms of brucellae was unconditionally reproduced. It was inversely proportionate to the infixing dose and the time passing from the moment of inoculation of the filtrable forms up to the infection with the visible forms of brucellae. It is concluded that filtrable forms of brucellae including unautoclaved ones are immunogenic. They are capable of reproducing a certain raising of their resistance to infection with visible forms of brucellae in mice inoculated with them. Immunity conditioned by inoculation of filtrable forms of brucellae is relative: it is inversely proportionate to the infixing dose and the time passing from the moment of the inoculation of the filtrable forms up to the time of the infection with visible forms of brucellae. (See also 62-15005)

Chervonskii, V. I.
INTERACTION OF SPECIFIC ANTIBODIES AND ORNITHOSIS VIRUS IN MONKEYS. [1961] 5p. 8 refs.
Order from OTS or SLA $1.10 62-13936

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 622-624.

DESCRIPTORS: *Virus infections, *Primates, *Immunization, Reaction (Psychology), Bacteriol aerosols, Antibodies, Test methods.

On single and repeat infections of immunized monkeys by inhalation of aerosols of ornithosis virus a sharp drop in the antibody level in the sera was noted in the first 1 to 3 days after infection with subsequent equalization of the antibody level curve after 10 or 12 days. More rapid stabilization in antibody level in the monkey sera (on 5th or 6th day) was noted after a third infection. (Author)

Derevici, A., Bronitki, A., and Petrescu, A.
BIOLOGICAL CHARACTERIZATION OF STRAINS OF INFLUENZA VIRUS ISOLATED IN RUMANIA: RELATIONSHIP WITH STRAINS ISOLATED DURING THE INFLUENZA EPIDEMIC IN FEB-MAR 59. [1961] 11p. 14 refs.
Order from OTS or SLA $1.60 62-13935

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 560-564.

DESCRIPTORS: *Virus diseases, *Influenza viruses, *Epidemiology, Etiology, Rumania.

Dunin, M. S.
ON SOME METHODS OF OBTAINING AND APPLYING ANTISERA IN PHYTOPATHOLOGICAL AND ENTOMOLOGICAL RESEARCH (O Nekotorykh Metodakh Poluscheniya i Primeneniya Antvozbuditel'nykh Syvorotok v Fitopatologii i Entomologii). Feb 62 [20]p. 36 refs. RTS 2003.
Order from OTS or SLA $1.60 62-15839

Trans. of Vestnik Sel'skokhozyaistvennoi Nauki (USSR) 1958 [v. 3] no. 3, p. 43-55.

DESCRIPTORS: *Antibodies, Antigens, Immunization, Plants, Pathology, Insects, Genetics, Toxicity, Separation, Viruses, Identification, Viscosimeters.

The high specificity and great sensitivity usually observed in serological reactions permit their use not only as diagnostic agents but also as a means, in some cases, of isolating substances (e.g., viruses) which are not amenable to purification by other

methods. Serologically blocked antigens (the precipitate or agglutinate and especially the super-precipitated or super-agglutinated antigens) show in most cases an increased immunising activity by comparison with corresponding amounts of the free antigens used to obtain active diagnostic antisera for use in plant pathology, entomology and various branches of plant breeding. The toxicity of many bacterial and fungal antigens towards animals is completely destroyed or reduced by serological blocking. This, together with the increased immunising activity of serologically blocked antigens facilitates the isolation of diagnostic sera of markedly higher titre and avidity than when the corresponding unblocked antigens are used. The viscosimetric method has a sensitivity 12 to 120 times greater than the drop method for the identification of phytopathogenic virus. The viscosimetric method also is equally suitable for the estimation of colored, colorless, transparent and turbid liquids and it permits the intensity of the reaction to be given a numerical value.

Il'enko, A. I.
INFLUENCE ON THE FATE OF THE BIPHASIC MENINGO-ENCEPHALITIS VIRUS BY FEEDING THE TICK VECTORS ON IMMUNE ANIMALS. [1961] 10p. 2 refs.
Order from OTS or SLA $1.10 62-13948

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 521-525.

DESCRIPTORS: *Encephalitis viruses, *Disease carriers, *Ticks, *Immunization , Animals.

The possibility of isolating the BME virus from the spontaneously infected ticks Ixodes persulcatus after feeding them on immune animals in foci of encephalitis (on cows) has been demonstrated. Study of the virus-carrier state at various stages of the experimentally-infected ticks Ixodes ricinus after feeding them on immune animals has shown that the anti bodies do not act on the virus present in the imaginal stage of the tick but apparently, only in the larvae does complete neutralization of virus occur. (Author)

Ilukewitsch, Alexey and Ruchs, George A.
FUNGISTATIC EXPERIMENTS IN VITRO WITH 71 DIFFERENT CHEMICAL PRODUCTS; NEW INHIBITORY SUBSTANCES FOR THE FUNGI: HISTOPLASMA CAPSULATUM DARLING (1906) AND BLASTOMYCES BRASILIENSIS CONNANT AND HOWELL (1941) (Experimentos Fungistaticos in Vitro con 71 Distintos Productos Quimicos; Nuevas Sustancias Inhibidoras para los Hongos: Histoplasma Capsulatum Darling (1906) y Blastomyces Brasiliensis Connant y Howell (1941) tr. by P. DePorte. 26 Mar 59, 30p. (2 photos and bibliography omitted.
Order from OTS or SLA $2.60 59-14580

Trans. of Revista de Sanidad y Asistencia Social (Venezuela) 1955, v. 20 [no. 5/6] p. 339-364.

DESCRIPTORS: Fungi, *Fungus infections, Inhibition, *Fungicides, Effectiveness.

Mostova, R. S.
THE EFFECT OF BACTERICIDAL IRRADIATION ON THE VIRULENCE OF MICROORGANISMS. 10 Aug 61 [8]p. (5 figs. omitted) 17 refs. JPRS: 8727.
Order from OTS or SLA $1.10 61-27694

Trans. of mono. Sbornik Trudov, Institut Radiatsionnoi Gigieny (Collected Works, Institute of Radiation Hygiene) Leningrad, 1959, p. 150-157.

DESCRIPTORS: *Ultraviolet radiation, *Bacteria, Growth, Culture media, Inhibition, *Microorganisms.

The reaction of mice to the administration of irradiated and nonirradiated cultures was compared and the intracutaneous administration of a physiclogical solution served as the control. The results show the weakening of the virulence of irradiated cultures. Cultures irradiated for 4 hours (the amount of bactericidal irradiation was 6,232.8 mcw min/cm^2) caused a much less pronounced reaction than non-irradiated cultures. In irradiation lasting for 4 hours, the number of grown colonies amounted to 38.1% and in irradiation for 1/2 hour 54.0% (if the number of colonies in the seed of a nonirradiated culture is assumed at 100%). (EE)

Plakunova, V. G.
SUR LA POSSIBILITE DE REGULATION DU pH DU MILIEU AU COURS DU DEVELOPPEMENT DES MICROORGANISMES A L'AIDE DES RESINES ECHANGEUSES d'IONS (Vozmozhnosti Regulirovaniya pH Sredy po Khodu Razvitiya Mikroorganizmov s Pomoshch'yu Ionoobmennykh Smol) (The Possibility of Regulating the pH of the Medium in the Course of the Development of the Micro-organisms by the Aid of the Ion Exchange Resins). 9p. (foreign text included) 2 refs. F/R-2600. (text in French).
Order from OTS or ETC $1.55 62-28010

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 137, no. 1, p. 189-191.

DESCRIPTORS: *Microorganisms, Growth, *Hydrogen ion concentration, Resins, Ion exchange resins.

Rautenshtein, Ya. I.
THE PHAGE PROBLEM IN THE PRODUCTION OF ANTIBIOTICS (Problema Fagii v Antibioticheskoi Promyshlennosti) tr. by R. Cawford. [1961] [22]p. 31 refs. [NIH] 8.
Order from OTS or SLA $2.60 62-15154

Trans. of Antibiotiki; Sborniki Perevodov, Obzorov i Referatov Inostrannoi Periodicheskoi Literatury (USSR) 1955, v. 8 [no. 4] p. 3-11.

DESCRIPTORS: *Bacteriophages, *Culture media, Viruses, Age, *Bacteria, Lysines, *Antibiotics, Production.

A literature survey.

Rozental, K. M. and Kopytovskaya, L. P.
STUDY OF MEASLES AETIOLOGY. I. ISOLATION OF MEASLES VIRUS ON DIRECT INFECTION OF CHICK EMBRYOS. [1961] 11p. 6 refs.
Order from OTS or SLA $1.60 62-13955

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 572-577.

DESCRIPTORS: *Measles, *Etiology, *Virus diseases, Chickens, Embryos, Antibodies,

The virus cultures obtained by direct infection of chick embryos with the blood of patients with measles and subsequent passaging and demonstrated by the method of antigenic curves caused on transfer to the explant of kindney epithelium changes characteristic of the measles virus with formation of typical intranuclear inclusions. The "Egg" and "Tissue" cultures of the measles virus did not differ antigenically. Confermation was provided for the statement that measles infection in chick embryos is asymptomatic and also the suitability of the method of antigenic curves in detecting virus in these conditions was established. (Author)

Vygodchikov, G. V., Vorob'ev, A. A. and others.
STUDY OF THE IMMUNOLOGICAL EFFECTIVENESS OF THE SEXT-ANATOXIN IN DISTANT REIMMUNIZATION (Eksperimental'noe Izuchenie Immunogennykh Svoistv Assotsiirovannykh Anaerobnykh Anatoksinov. Soobshchenie II. Izuchenie Immunologicheskoi Effektivnosti Sekstaanatoksina pri Otdalennoi Reimmunizatsii). Rept. no. 2 of Experimental Study of the Immunogenic Properties of Associated Anaerobic Anatoxins. 24 Nov 61, 11p. 1 ref. Trans. V-1750.
Order from OTS or SLA $1.60 62-13454

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1961, v. 32, no. 7, p. 74-77.

DESCRIPTORS: *Immunization, *Antigens, *Antibodies, Clostridium perfringens, Clostridium tetani, Clostridium botulinum, Clostridium oedematiens.
Four months after a single or two-replication immunization of rabbits with an anaerobic sext-anatoxin, including the tetanus, the botulism types A, B, and C and the gangrenous (Cl. perfringens and Cl. oedematiens) anatoxins, there were detected in the blood of the animals the botulism types B and C and the tetanus oedematiens antitoxins; the perfringens antitoxin was detected only after a two-replication vaccination and in the lower titers. Distant reimmunization of rabbits with a sext-anatoxin conducted 4 months after the original immunization provoked 15 days later the appearance of a marked increase in the level of antitoxic immunity with regard to all 6 components of the associated preparation. (Author)

Neurology and Psychiatry

Shcherbina, E. A.
THE NEURODYNAMIC CHARACTERISTICS OF THE SCHIZOPHRENIC DEFECT, tr. by R. Crawford. [1961] [13]p. 10 refs.
Order from OTS or SLA $1.60 62-13906

Trans. of #Zhu[rnal] Vyssh[ei] Nervn[oi] Deyatel['nosti] (USSR) 1960, v. 10, no. 6, p. 821-826.

DESCRIPTORS: *Psychoses, Classification, Psychotherapy, *Psychoneurosis, Behavior, Emotions, *Stress (Psychology).

Some 123 schizophrenic patients were examined whe had been discharged from the Stalino First Regional Psychoneurological Hospital in a state of therapeutic remission. These observations showed that 75 of the number examined with catamnestic periods of from two to ten years exhibited signs of schizophrenic defect which was evident both in behavioural features and in these neurodynamic investigations. As for the remaining patients, 22 were found to have recovered and in 26 the process was continuing. Abnormalities were demonstrated in all the patients with schizophrenic defect. The neurodynamic disturbances seen in patients with defect were, however, much less pronounced than in schizophrenics in the "process" stage. This applied particularly to first system signal functions. The neurodynamic and psychopathological features revealed by the examination afforded us grounds for distinguishing four main types of defect, namely pseudopsychopathic, paranoid, asthenohypochondriac and destructive.

Tsuker, M. B.
METHODS OF ELECTROPHYSIOLOGICAL RESEARCH. 7 Mar 61 [32]p. 1 ref. JPRS: 12851.
Order from OTS or SLA $3.60 62-23462

Trans. of mono. Osnovy Nevropatologii Detskogo Vozrasta, Moscow, 1961, p. 196-218.

DESCRIPTORS: *Bioelectronics, Diagnosis, Neurology, *Neuromuscular transmission, Reaction time, Measurement, *Electroencephalography, Muscles, Kymography.

Pathology

CONFERENCE OF CEMA PUBLIC HEALTH MINISTERS (NO. 6) HELD IN BUDAPEST, 5-14 JUNE 61 23 Jan 62 [92]p. JPRS: 12091.
Order from OTS or SLA $8.60 62-19662

Trans. of Nepegeszsegugy (Hungary) 1961, v. 42, no. 7, p. 193-214 and 220-221.

DESCRIPTORS: *Conferences, *Public health, *Hospitals, Hungary, *Preventive medicine.

Contents:
Summary of conference
Resolutions adopted at the conference
Some problems in connection with the long-range planning of public health in socialist countries, by Frigyos Doleschall
Interrelations between the organizational structure and the network of public health, within long-range planning, by A. G. Safonov
Some problems in connection with the 20-year plan to develop Hungary's hospitals, by Laszlo Csorba.

CONTROL OF DISEASES COMMON TO MAN AND ANIMALS (ZOONOSES): [SELECTED PARTS].
23 Feb 62 [105]p. JPRS: 12716.
Order from OTS or SLA $9.10 62-19778

Trans. of mono. Bor'ba s Boleznyami, Obshchimi dlya Cheloveka i Zhivotnykh (Zoonozy) Moscow, 1961, p. 22-37, 54-116, 123-139.

Portions of this report will not reproduce well.

DESCRIPTORS: *Diseases, *Control, *Man, *Animals, *Brucellosis, *Q fever, *Tularemia, *Leukemia, *Spirochetosis, *Plague, *Toxoplasmosis, *Tapeworms, *Trichiniasis, Parasitic infections, Milk, Fishes, Infections, Countermeasures, Preventive medicine, Veterinary medicine, Epidemiology, Public health, Pathology.

Contents:

The problem of zoonoses in the USSR, by S. M. Smirnov
Ways of reducing the incidence of brucellosis among the population, by P. A. Vershilova
Veterinary-sanitary and antiepizootic measures for Q fever among agricultural animals, by A. P. Zotov
Basic problems in the prophylaxis of tularemia among people, by N. G. Olsuf'ev
Epizootology of tularemia and ways of eliminating the disease, by K. A. Dorofeev
Leukoses of agricultural animals, by A. P. Zotov
Prophylaxis and control measures for leptospirosis in man and animals, by S. Ya. Lyubashenko
The epidemic and epizootic status of natural plague foci in the USSR, by B. N. Pastukhov
The problem of toxoplasmosis, by D. N. Zasukhin
The problem of management of taeniasis in the population, by V. P. Pod'yapol'skaya
The problem of management of trichiniasis in the population, by N. N. Plotnikov and V. A. Lokhmanenko
Epizootology and epidemiology of echinococciasis in the light of the latest scientific information, by A. M. Petrov
Veterinary-sanitary expertise of milk and dairy products in zoonotic diseases, by V. P. Koryazhnov
Veterinary-sanitary expertise in fish zoonoses, by Kh. S. Goreglyad.

MEDICAL INDUSTRY, 1961, NO. 8: [SELECTED ARTICLES]. 26 Dec 61 [23]p. 17 refs. JPRS: 11650.
Order from OTS or SLA $2.60 62-13853

Trans. of Meditsinskaya Promyshlennost' SSSR, 1961 [v. 15] no. 8, p. 39-43, 45-48, 56-60.

DESCRIPTORS: *Drugs, *Medical research, *Dextran, *Molecular weight, Artificial heart, *Blood, Foaming inhibitors, *Silicanes, *Fatty acid esters, *Arteriosclerosis, *Radiation injuries, Skin, *Medical equipment, *Ultrasonic equipment, Polymers.

Contents:

The determination of the molecular weight of polyglucin, by V. Ya. Chernyak and T. V. Polushina
The use of polysiloxan in working with an extracorporeal circulation apparatus, by K. Yu. Korunzhaya
Linetol, by Z. L. Izumrudova
Ultrasonic portable therapeutic apparatus, UTP-1, by M. D. Gurevich and E. L. Beletskii.

MILITARY-MEDICAL JOURNAL, 1961, NO. 12.
20 Mar 62 [187]p. JPRS: 13063.
Order from OTS or SLA $13.00 62-23616

Trans. of Voenno-Meditsinskii Zhurnal (USSR) 1961, no. 12, p. 3-97.

DESCRIPTORS: *Military medicine, Therapy, *Blood, Diseases, *Amoebic dysentery, Diagnosis, *Rheumatic fever, Hormones, *Blood proteins, Epidemiology, *Rickettsia, Viruses, Military personnel, Intestine, Amino acids, *Military rations, *Peptic ulcers, Suppurative infections, *Blood transfusions, Drugs, Sleep, Liver, Distilling plants, Phosphorus, Radioactive isotopes, Kidneys, Conferences, Radiation sickness.

Contents:

Military medical science on the level of current requirements
Some problems of organization of sorting and therapeutic aid at stages of medical evacuation, by N. G. Ivanov
Problems of military field therapy, by E. B. Zakrzhevskii
Some problems of military field therapy, by A. V. Kon'kov
Autoimmune blood diseases, by E. B. Zakrzhevski and V. P. Dygin
The significance of comprehensive examination in the interpretation of the diagnosis "healthy dysentery carrier", by P. A. Alisov, A. P. Kazantsev and T. A. Levitov
Treatment of patients with rheumatic fever with the use of hormones in combination with other agents, by M. P. Kramarenko, G. S. Gikalov and R. G. Leshchinskaya
Electrophoretic investigation of serum protein fractions in rheumatic fever in young persons, by B. N. Tolchenov and G. Kh. Valeev
Immediate prospects of specific prophylaxis of diseases caused by some rickettsias and viruses, by A. T. Kravchenko
Experience in the serum diagnosis of adenovirus diseases in servicemen, by S. A. Burov, B. A. Chukhlovin and L. K. Maslennikova
The organization of work of intestinal disease clinics among the troops, by B. L. Shura-Bura, M. D. Krasnov and K. A. Morozov
The content of essential amino acids in naval rations, by F. M. Gladkii
Competition of the personnel of the feodosiya sanatorium of the ministry of defense, by G. N. Sopova
Perforating gastric and duodenal ulcers in young persons, by D. V. Usov
Transfusion of blood and blood substitutes for peptic ulcer in young persons, by G. K. Esaulov.
Interrupted drug-induced sleep treatment for peptic ulcer patients, by G. A. Gorelov
Changes in the antitoxic function of the liver in patients with gastric and duodenal ulcers under the influence of sanatorium-health-resort treatment, by I. I. Bunov
First experience in the organization of medical care of counterattack operations during the second World War, by A. S. Georgievskii and N. A. Vishnevskii
Improved distillation apparatus, by K. A. Botezat-Belyi and D. A. Titov
Protective apparatus for giving radioactive phosphorus to patients, by A. L. Kozyreva and N. T. Murzikov

Hemorrhagic fever with a renal syndrome, by I. V. Seppi and A. I. Zavadovskii: book review
Theoretical scientific conference on the problem of reducing and eliminating epidemic diseases, by R. A. Tararin and A. V. Zavarzin
Scientific conference on the search for prophylactic and therapeutic agents for radiation sickness, by E. N. Antipenko
Partical scientific conference in a sanatorium, by A. E. Grinev
List of articles published in the military medical journal in 1961
Author Index.

[PLAN FOR THE PRESERVATION AND FURTHERING OF PUBLIC HEALTH IN KAZAKHSTAN]. 6 Mar 62 [6]p. JPRS: 12889.
Order from OTS or SLA $1.10 62-23399

Trans. of Zdravookhranenie Kazakhstana (USSR) 1961, v. 21, no. 10, p. 3-6.

DESCRIPTORS: *Public health, Medical research, Medical personnel, Research program administration, Industrial medicine.

POISONING OF SWINE IN YUGOSLAVIA. 11 Sep 61 [10]p. JPRS: 10106.
Order from OTS or SLA $1.10 62-19709

Trans. of Veterinarski Glasnik (Yugoslavia) 1961, v. 15, no. 2, p. 139-144.

DESCRIPTORS: *Swine, *Poisoning, *Parathion, *Plants, Pathology.

Contents:
Contribution to knowledge of poisoning of swine with river side (Xanthium Italicum) by S. Kalinski and Z. Madzirov
A case of swine poisoning with parathion, by M. Popovic.

SOVIET MEDICAL RESEARCH. 23 Mar 62 [12]p. 9 refs. JPRS: 13094.
Order from OTS or SLA $1.60 62-23627

Trans. of Laboratornoe Delo (USSR) 1961, v. 7, no. 6, p. 49-50 and Gigiena i Sanitariya (USSR) 1962, v. 27, no. 1, p. 100-101.

DESCRIPTORS: *Disease carriers, *Ticks, *Toxoplasma, Parisitology, *Radiation injuries, *Countermeasures, Sanitary engineering.

Contents:
Method of artifically infecting ixodes ticks with toxoplasma, by S. F. Shimanskii
Republic Scientific-Practical Conference on Radiation Hygiene, by I. E. Mukhin.

STATISTICAL REPORT ON HUNGARY'S PUBLIC HEALTH IN 1960. 31 Jan 62 [92]p. JPRS: 12245.
Order from OTS or SLA $8.60 62-19557

Trans. of Nepegeszsegugy (Hungary) 1961, v. 42, no. 8, p. 225-253.

DESCRIPTORS: *Public health, Hungary, *Vital statistics, Medical personnel, Therapy, Preventive medicine, Pathology, Statistical analysis.

TASKS OF THE RAYON HEAD DOCTOR IN SOLVING HEALTH AND EPIDEMIOLOGICAL PROBLEMS. 28 Feb 61 [20]p. JPRS: 6800.
Order from OTS or SLA $1.60 62-19246

Trans. from Muncitorul Sanitar (Rumania) 1960, v. 11, no. 44[544] p. 2-3.

DESCRIPTORS: *Medical personnel, *Public health, Epidemiology, Preventive medicine.

YUGOSLAV REGULATIONS FOR PROTECTION AGAINST MALARIA AND IONIZING RADIATION (DECREES 86 AND 291). 25 Jan 61 [15]p. JPRS: 6642.
Order from OTS or SLA $1.60 62-19350

Trans. of Sluzbeni List [FNJR] (Yugoslavia) 1960, no. 8, p. 205-206 and no. 22, p. 453-456.

DESCRIPTORS: *Preventive medicine, *Malaria, Control, Ionization, *Radiation effects.

Demina, G. I., Krivtsova, R. B. and others.
REACTIONS TO BIVALENT ANTIPLAGUE VACCINE [1961] 5p.
Order from OTS or SLA $1.10 62-15329

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956] v. 11, p. 65-67.

DESCRIPTORS: *Pneumonic plague, *Skin, *Body temperature, *Immunization, *Plague.

Dikun, P. P.
THE USE OF THE FINE STRUCTURE OF FLUORESCENCE SPECTRA FOR DETERMINATION OF CARCINOGENIC SUBSTANCES, tr. by L. Summerfield [1961] [24]p. (2 figs. 11 tables omitted).
Order from OTS or SLA $2.60 62-13972

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 75-83.

DESCRIPTORS: *Fluorescence, *Spectrographic analysis, Anthracenes, Heptanes, *Cancer, Production, Hydrocarbons, Molecular structure

Dos Ghali, Jean.
INFILTRATIONS OF THE CERVICO-THORACIC SYMPATHETICS IN VARIOUS RESPIRATORY SYNDROMES: EXCERPTS. [1962] 29p.
Available on loan from SLA 62-10750

Trans. of unidentified mono. (thesis) Paris U., 1940, p. 12-14, 15-23, 83-87, 90-146.

DESCRIPTORS: *Respiratory diseases, *Therapy, *Autonomic nervous system, Anatomy, Ganglia, *Nerves, Lungs, Edema, Embolism, Asthma, Tuberculosis, Suppurative infections.

Egorov, P. I. and Bogin, Yu. N.
THE USE OF A NEW PHYSICAL METHOD OF INTERFERENCE-IMPULSE THERAPY AT THE CLINIC OF INTERNAL DISEASE. 26 Oct 61 [11]p. 2 refs. JPRS: 10670.
Order from OTS or SLA $1.60 62-13269

Trans. of Terapevticheskii Arkhiv (USSR) 1961, v. 33, no. 6, p. 28-32.

Portions of this report will not reproduce well.

DESCRIPTORS: *Therapy, *Hypertension, Endocrine glands, Digestive system, Rheumatism, Pathology, Bioelectronics, Interference, *Medical equipment.

Interference-impulse therapy can be successfully employed in the internal diseases clinic in a number of diseases which are accompanied by the pain syndrome and irritation of the sympathetic nodes of the vegetative nervous system. The method of therapy proved to be more effective in the treatment of gastrointestinal diseases accompanied by a reflex involvement of solar plexus nodes. It brings good results in the diseases of large joints of a rheumatoid nature in the absence of acute inflammatory changes. In some cases interference-impulse therapy can be employed in hypertensive disease of the cerebral type. This method of therapy produces no appreciable negative side effects and is well tolerated by patients. (Author)

Gefter, L. I. and Morozova, M. G.
THE INTRAVITAL DIAGNOSIS OF OBLITERATING PHLEBITIS OF THE HEPATIC VEINS (K Prizhiznennomu Raspoznavaniyu Obliteriruyushchego Flebita Pechenochnykh Ven). [1961] 8p. (3 figs. omitted) 11 refs.
Order from OTS or SLA $1.10 62-15394

Trans. of Terapevticheskii Arkhiv (USSR) 1956, v. 28, no. 4, p. 73-77.

DESCRIPTORS: *Phlebitis, *Veins, *Liver, Thrombosis, Hepatitis, Obturation, *Diagnosis, Therapy, Drugs, Blood coagulation, Inhibition.

Groen, J. and Heide, R. M. van der.
ATHEROSCLEROSIS AND NUTRITION [PT. I]. (Atherosclerose en Voeding) tr. by P. Pallamary. 5 Feb 59, 23p. (1 fig. 66 refs. omitted).
Order from OTS or SLA $2.60 59-14715

Trans. of Voeding (Netherlands) 1956, v. 17, no. 11, p. 485-498.

DESCRIPTORS: *Arteriosclerosis, *Etiology, *Nutrition, Pathology, *Cholesterol.

Gurevich, L. I. and Frankfurt, L. A.
ON HAEMOPOIESIS AFTER TOTAL GASTRECTOMY, tr. by L. Summerfield. [1961] [19]p. 28 refs.
Order from OTS or SLA $1.60 62-13965

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 26-33.

DESCRIPTORS: *Stomach, *Excision, *Hemopoiesis, Cancer, Anemia, Hematology.

Irukayama, Katsuro.
RELATION BETWEEN MINAMATA DISEASE AND CONTAMINATION IN MINAMATA BAY, tr. by W. Himel. Rept. no. 8 of Summary of Repts. on the Study of Minamata Disease. 19 Oct 59, 3p.
Order from OTS or SLA $1.10 59-22097

Trans. of unidentified mono. ed. by Kansuke Sera, 20 Aug 59, p. 12-13.

DESCRIPTORS: Diseases, Contamination, *Shellfish, Toxicity, *Mercury compounds, Sulfur compounds, *Poisoning.

Minamata disease can be produced in cats and rats by feeding them Mytilus edulis, but it is not produced when the shellfish is ashed. Shellfish ashed by heating for 26 hours at 200°C was administered, but did not produce the disease. This indicates that the toxic substance is either organic or that it is readily volatilized by heating. Moist ashing was performed on toxic Mytilus edulis and on control shellfish (Arca inflats) by the method of Fresenius van Babo, and spot tests were made with cupric iodide. As a result of qualitative tests for Hg, the toxic Mytilus edulis showed an orange color, but the reaction was negative for the control shellfish. At present, Hg is strongly suspected to be the contaminating substance. (See also 59-22094)

Ito, Jiro, Yasuraoka, Kazuo and Komiya, Yoshitaka.
STUDIES ON THE SURVIVAL OF SCHISTOSOMA JAPONICUM IN VITRO. I. SURVIVAL IN BLOOD OR SERUM MEDIA, tr. by William Himel. 12 May 59, 24p. (1 fig. omitted) 7 refs.
Order from OTS or SLA $2.60 59-16301

Trans. of Kiseichugaku Zasshi (Japan) 1955, v. 4, no. 1, p. 12-18.

DESCRIPTORS: *Schistosma, Growth, *Culture media, Blood, Serum, Horses, Age, Sex.

Schistosomes were removed from rabbits and guinea pigs and placed in Carrel flasks, three pair in each, containing 6 ml of medium. In order to secure rigidly sterile conditions, antibiotics were added to the medium. Mortality of worms was used as the cirterion

of survival. Whole blood, defibrinated blood, corpuscle suspension and serum of horse were applied as the medium. Among them, serum was the most efficient for the survival of the worms. The survival period of worms became longer as the serum was more concentrated. The most effective temperature for maintaining the life of the worms was 28°C. The worms survived in serum for 33 days (22-45) under the best conditions without changing the medium. With changes of fresh medium at intervals, the life of the worms was prolonged for 64 days at a maximum. The males survived for over a month, whereas the females died within a month. Addition of pig embryo extract to the serum had no effect on the survival of this worm. (Author)

Khadzhiolov, Khr.
INTERNATIONAL SYMPOSIUM ON SILICOSIS (NO. I) [HELD AT] PLOVDIV, 10-12 NOV 60. 20 Feb 62 [11]p. JPRS: 12608.
Order from OTS or SLA $1.60 62-19783

Trans. of Priroda (Bulgaria) 1961, v. 10, no. 2, p. 100-102.

DESCRIPTORS: Symposia, *Silicosis, Diseases, Public health, Medical research, Bulgaria.

Kima, Th.
ORGANIZATION OF THE PROTECTION OF PUBLIC HEALTH: THE TASKS OF THE PHYSICIAN IN THE PREVENTION OF EPIDEMICS (Organisation des Gesundheitsschutzes; Die Aufgaben des Arztes bei der Seuchenabwehr) tr. by Claudius F. Mayer. [1960] [10]p. H 4811.
Order from OTS or SLA $1.10 60-21029

Trans. of das Deutsche Gesundheitswesen (East Germany) 1959, v. 14, 27 Aug, p. 1638-1642.

DESCRIPTORS: *Public health, Medical personnel, Personnel, *Epidemiology, *Communicable diseases, Diseases, Countermeasures, East Germany.

Kitamura, Seiji.
QUANTITATIVE ESTIMATION OF MERCURY, tr. by William Himel. Rept. no. 5 of Summary of Repts. on the Study of Minamata Disease. 8 Oct 59, 2p.
Order from OTS or SLA $1.10 59-19893

Trans. from unidentified mono. ed. by Kansuke Sera, 20 Aug 59.

DESCRIPTORS: Diseases, *Poisoning, *Mercury compounds, Quantitative analysis, *Tissues (Biology), *Fish, *Shellfish.

In the mud of the bay, in seafood and in animals and humans in which the disease occurred, the accumulation of an unusually large amount of mercury was definitely observed. It is justifiable to consider this as mercury poisoning. (Author) (See also 59-22097)

Kucherov, P. M.
TRAINING OF SPECIALIST CADRES FOR THE URALSK ANTI-PLAGUE STATION. [1961] 9p.
Order from OTS or SLA $1.10 62-15332

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956] v. 11; p. 11-16.

DESCRIPTORS: *Medical personnel, *Training, Countermeasures, *Plague, Public health, Sanitary engineering.

Kukowka, A., Stephan, W., and Krebs, W.
THE DUCK FARM AS SOURCE OF ORNITHOSIS INFECTIONS OF HUMANS. 22 Mar 61 [18]p. 15 refs. JPRS: 6976.
Order from OTS or SLA $1.60 52-19716

Trans. of Deutsche Gesundheitswesen (East Germany) 1960, v. 15, no. 51, p. 2477-2483.

DESCRIPTORS: *Birds, Agriculture, *Disease carriers, Virus pneumonia.

Ten cases histories are reported in which there was a question of a duck farm as source.

Leikina, E. S.
NATURAL FOCI OF INFECTION OF SOME HELMINTHIASES (K Voprosu o Prirodnoi Ochagovosti Nekotorykh Gel'mintozov). 1960, 30p. 47 refs. RSTP no. 146-60.
Order from OTS or SLA $2.60 62-15072

Trans. of Meditsinskaya Parazitologiya i Parazitarnye Bolezni (USSR) 1957, v. 26, Mar/Apr, P. 140-152.

DESCRIPTORS: *Intestine, Parasites, Worms.

Lohss, Friedrich and Kallee, Ekkehard.
DETECTION OF TRACE AMOUNTS OF ALBUMIN BY ANALYSIS OF ANTIGEN-ANTIBODY PRECIPITATES (Spurennachweis von Albumin durch Analyse von Antigen-Antikörperprecitaten) tr. by P. Hajdu. 27 Nov 59, 11p. (8 figs. omitted) 16 refs.
Order from OTS or SLA $1.60 60-13036

Trans. of Clin[ica] Chim[ica] Acta (Netherlands) 1959, v. 4, p. 127-133.

DESCRIPTORS: *Albumins, Plasma proteins, *Antibodies, *Antigens, Precipitation, *Paper chromatography.

Extremely small amounts of albumin can be prepared by extraction of radioiodinated albumin from antigen (AG)-antibody (AB) precipitates with trichloroacetic acid (TCA) and acetone (Ac). During this procedure globulins become denatured whereas albumin retains its specific electrophoretic mobility and immunological properties. 200 ug of radioiodinated serum albumin (Abbott) were added to 2 ml of an analbuminemic serum and then immunologically precipitated. Some 70% of the precipitated serum albumin were extractable with TCA-Ac and then directly detectable in

autoradiograms of paper electrophoresis strips. The limits of this method lay in the range of less than one tenth of this figure. After the extraction with TCA-Ac of an AG-AB precipitate obtained from 10 ml radioiodinated analbuminemic serum, no albumin could be detected. Whereas the anti-human-albumin serum used seemed to possess a high specificity, only 13% of the AG could be removed from the AG-AB precipitate, and the extract consisted of 2 components in autoradiograms of paper electrophoresis strips. One of these components migrated slightly faster than albumin, the other more slowly between albumin and α_1 globulin. Thus we were unable to detect, even with this most sensitive technique, proteins unequivocally representing albumin in one of Bennhold's cases of analbuminemia. (Author)

Mestitzova, M. and Kossey, P.
CZECHOSLOVAK REPORT ON EXPERIMENTS ON THE CAUSE OF LUNG CANCER. 17 May 61 [17]p. JPRS: 4621.
Order from OTS or SLA $1.60 62-19330

Trans. of Neoplasma (Czechoslovakia) 1961, v. 8, no. 1, p. 27-38.

DESCRIPTORS: Etiology, *Lungs, *Cancer, Benzene derivatives, Cancer research, *Industrial plants, *Air, Contamination.

Mice were placed in a gas chamber where the air contamination by tar fumes found in aluminum production could be duplicated. Studies of the effects of the tar fumes on the behavior of 3:4 benzopyren in the lung tissues and in the blood were followed by clinical, anatomical, pathological, histological and biochemical observations. One group of mice was subjected to the tar fumes 5 times a week for a year. Another group was exposed simultaneously to an equal concentration for 10 months. Lung tumors were not produced before the fifth month. The experiment shows the relationship between the early appearance of nodules and exposure to tar fumes. The change to a malignant degeneration appears to be dependent on the intensity of the concentration of tar fumes and their accumulation in the lungs. Histological examinations indicated that the lung tumors originated in the alveolar structures of the lung. Long exposure of lung tissue to the carcinogenic materials is necessary for the accumulation of a sufficient amount of these materials to produce changes in the cell processes.

Napalkov, P. N. and Martynova, N. V.
NOMENCLATURE AND CLINICAL CLASSIFICATION OF SPONTANEOUS GANGRENE [1961] 13p. [NIH] no. 37.
Order from OTS or SLA $1.60 62-15158

Trans. of Sanitarno-Gigienicheskii Meditsinskii Institut. Trudy (USSR) 1956, v. 33, p. 71-81.

DESCRIPTORS: *Cerebral cortex, Inhibition, Stimulation, *Psychoneuroses, Mental diseases, Cells (Biology).

Novikova, E. I., Rozhkov, A. A. and others.
OBSERVATIONS ON REACTIONS TO ANTIPLAGUE VACCINE 1.17 BY THOSE INOCULATED. [1961] 16p.
Order from OTS or SLA $1.60 62-15328

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956] v. 11, p. 69ff.

DESCRIPTORS: *Pneumonic plague, *Skin, *Body temperature, *Immunization, Plague.

Parnas, Jozef, Szmuness, Wolf, and Ujda, Jozef.
CASE OF PROBABLE INFECTION WITH ORNITHOSIS. 10 Aug 61 [7]p. JPRS: 8720.
Order from OTS or SLA $1.10 62-19477

Trans. of Polski Tygodnik Lekarski, 1961, v. 16 [no. 13] p. 641-643.

DESCRIPTORS: *Virus pneumonia, *Epidemiology, Diagnosis, Therapy, Vital statistics, *Birds, *Disease carriers.

Paszkiewicz, Ludwik.
THE SOCIETY OF POLISH ANATOMY PATHOLOGISTS. 22 Dec 61 [5]p. JPRS: 11632.
Order from OTS or SLA $1.10 62-19548

Trans. of Nauka Polska, 1961 [v. 9] no. 1(33) p. 158-159.

DESCRIPTORS: *Anatomy, *Pathology, Medical personnel, Medical research, Poland.

Pavek, K. and Selecky, F. V.
CZECHOSLOVAK REPORT ON COMBATTING CARDIAC INFARCTION. 5 July 61 [5]p. (2 figs. omitted). JPRS: 8544.
Order from OTS or SLA $1.10 62-19219

Trans. of Nasa Veda (Czechoslovakia) 1961, v. 8, no. 2, p. 90-93.

DESCRIPTORS: *Heart, *Cardiac muscles, *Arteriosclerosis, Blood circulation, Pathology, Countermeasures, Czechoslovakia

Petrov, I. R. and Gubler, E. V.
THE SIGNIFICANCE OF AND PROSPECTS FOR THE USE OF HYPOTHERMIA IN DIFFERENT FIELDS OF MEDICINE. 14 Feb 62, 13p. JPRS: 12522.
Order from OTS $0.50 62-11171

Trans. of mono. Iskusstvennaya Gipotermiya (Artificial Hypothermia) Leningrad, 1961, p. 180-193.

DESCRIPTORS: *Hypothermia, Medicine, Surgery, Blood circulation, Heart, Neurology, Diseases, Therapy.

Pötz, Lieselotte
ELECTRON MICROSCOPIC INVESTIGATIONS OF THE SKIN OF RABBITS WITH INFECTIOUS MYXOMATOSIS (Elektronmikroskopische Untersuchungen der Kaninchenhaut bei Infektiöser Myxomatose) tr. by P. Hajdu. 28 Oct 58, 24p. (12 figs. bibliography omitted)
Order from OTS or SLA $2.60 59-12132

Trans. of Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie (West Germany) 1957, v. 118, no. 1, p. 1-23.

DESCRIPTORS: *Virus diseases, *Rabbits, *Skin, Pathology, Tumors, *Electronic microscopy, Viruses, Morphology, Histology, Veterinary medicine.

Rowinski, Ksawery.
POSSIBILITIES FOR DEVELOPING RESEARCH ON MEDICAL PROBLEMS OF SPECIAL SIGNIFICANCE TO THE POLISH NATIONAL ECONOMY. 20 Mar 61 [9]p. 2 refs. JPRS: 4471.
Order from OTS or SLA $1.10 62-19311

Trans. of Polski Tygodnik Lekarski, 1960, v. 15, no. 49, p. 1898-1900.

DESCRIPTORS: *Scientific research, *Medicine, Virus diseases, Neoplasms, Drugs, Psychiatry, Genetics, Traumatic shock.

Schwartz, Daniel, Denoix, Pierre-F. and Anguerra, Georges.
RESEARCH ON THE LOCALITY OF CANCERS ASSOCIATED WITH THE TOBACCO AND ALCOHOL FACTORS IN HUMANS (Recherche des Localisations du Cancer Associées aux Facteurs Tobac et Alcool chez l'Homme) tr. by P. Hajdu. 27 Apr 60, 37p. 16 refs. [NIH] no. 4-28-60.
Order from OTS or SLA $3.60 60-17483

Trans. of Association Francaise pour l'Étude du Cancer. Bulletin, 1957, v. 44, no. 2, p. 336-361.

DESCRIPTORS: *Cancer, Cancer research, Etiology, *Tobacco, *Alcohols, Pathology.

Results are given of a retrospective study on 2,147 cancer patients, each having a diseased non-cancerous and a non-diseased control of the same age (5 years sections) interrogated at the same date, by the same questioner and in the same group of hospitals. For the tobacco factor an association is noted with cancer of the lungs, the buccal cavity, the oropharynx, the hypopharynx, the esophagus and possibly the bladder. The locations belonging to the upper respiratory-digestive passages may be divided into two groups: (1) the respiratory type group (lungs, Larynx), in which cases the tendency to inhalation of smoke and the predominant use of cigarettes are particularly marked; and (2) the digestive type group (buccal cavity, pharynx, esophagus) in which cases these two characteristics do not appear, but in which the smokers' habit of rolling their own cigarettes is particularly marked (at least in the case of the buccal cavity and the esophagus). For the alcohol factor association is shown with cancers of the buccal cavity, the oropharynx, the hypopharynx and the esophagus (digestive type group mentioned above). Reservations are made for the lungs and larynx (respiratory type group). (Author)

Sebe, Eigai.
EFFECT OF VITAMIN B_6 AND DIAMINE OXIDASE ON MINAMATA DISEASE, tr. by W. Himel. Rept. no. 7. of Summary of Repts. on the Study of Minamata Disease. 16 Oct 59, 3p.
Order from OTS or SLA $1.10 59-22094

Trans. from unidentified mono. ed. by Kansuke Sera, 20 Aug 59.

DESCRIPTORS: *Vitamin B, *Deficiency diseases, *Histaminase, Inhibition, Mercury, Poisoning, *Shellfish.

Based on the idea that vitamin B_6 might have an effect on Minamata disease, we administered 8 g. of black shellfish (from Minamata) to mice reared with a deficiency of vitamin B_6, and they died in one to two days. By simultaneously administering control shellfish and vitamin B_6 preparation to mice, we found that we scarcely observed any of the toxicity such as that in the black shellfish from Minamata and that they did not die. Since the black shellfish were rather strongly toxic to mice reared on food deficient in vitamin B_6, we carefully investigated the toxic component in the black shellfish and divided it into (1) 5% acetic acid residue, (2) soluble protein precipitated with alcohol added to extraction solution, (3) the soluble portion which did not precipitate, (4) inorganic salt portion and desalted portion, using the soluble portion and a weak cation exchange resin, and (5) were purified by using anion exchange resin and performing de-acidification treatment. The toxicity toward vitamin B_6 deficient mice of these fractions (1) to (5) was investigated, and toxicity was observed, especially in (1) and (4). (Author) (See also 59-19893)

Shchurenkova, A. I.
INTERNATIONAL CONFERENCE ON PROBLEMS OF ELIMINATING PARASITIC AND INFECTIOUS DISEASES. 12 Mar 62 [10]p. JPRS: 12976.
Order from OTS or SLA $1.10 62-23441

Trans. of Zdravookhranenie Tadzhikistana (USSR) 1961 [v. 8] no. 6, p. 43-47.

DESCRIPTORS: *Conferences, *Parasitic infections, *Infections, *Diseases, Public health, *Tropical diseases, Tropical regions.

Shishkin, A. K.
TRAINING OF CADRES FOR FIELD ANTI-PLAGUE STATIONS UNDER THE JURISDICTION OF THE ROSTOV INSTITUTE. [1961] 9p.
Order from OTS or SLA $1.10 62-15333

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956] v. 11, p. 3-9.

DESCRIPTORS: *Medical personnel, *Training, *Plague, Countermeasures, Public health, Sanitary engineering.

Stepanov, I. V. and Ral'tsevich, S. A.
PLAGUE EPIDEMIC IN BATUM IN 1920 (Chuma v Batumi v 1920 Godu). [1961] 3p.
Order from OTS or SLA $1.10 62-13994

Trans. of Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956, v. 10, p. 147-148.

DESCRIPTORS: *Plague, Epidemiology, USSR.

Sysoev, F. F.
PROWAZEK'S BODIES IN TRACHOMA AND THEIR EPIDEMIOLOGICAL SIGNIFICANCE (Tel'tsa Provacheka pri Trakhome i Ikh Epidemiologicheskoe Znachenie). [1961] 12p. 1 ref. [RSTP] No. 141.
Order from OTS or SLA $1.60 62-15079

Trans. of Vestnik Oftamologii (USSR) 1956, v. 69, no. 2, p. 3-9.

DESCRIPTORS: *Trachoma, Infections, Diseases, *Eye, Epidemiology.

After establishment of the existence of stage IV trachoma by ordinary methods of investigation, elements of unhealed trachoma remain in almost half of the patients in the form of small focal infiltrations and solitary follicles deeply situated in the tarsal conjunctiva or at the corners of the cartilages (stage III). Prowazek bodies are found even in those in whom the diagnosis of healed trachoma had been established biomicroscopically (convalescent carriage), which is of epidemiological significance. Patients with the so-called forme fruste of trachoma, latent trachoma and microtrachoma are often recorded as healthy in ordinary examinations, but in practice are virus carriers. Under certain conditions, the characteristic clinical picture of the disease can develop in them, diagnosable even by ordinary methods of examinations. The period of four to six months established for observation of the healed cases (stage IV) should be considered arbitrary. Systematic observation of them should be carried out without definition of periods of time. In view of the relapses observed in those who have been cured, the trachoma (medical) stations in the trachoma foci should be maintained for a certain time even in the event all the patients are cured. (Author)

Volskii, M. E.
METHOD OF OBLIQUE PERCUSSION FOR DETERMINING MORBIDITY IN THE REGION OF THE GALL-BLADDER. [1961] [4]p.
Order from OTS or SLA $1.10 62-15339

Trans. of Sovetskaya Meditsina (USSR) 1955, v. 19, no. 11, p. 57-58.

DESCRIPTORS: *Gallbladder, *Diseases, *Diagnosis, *Medical examination, Peptic ulcers

In cholecystic disease a slanting blow from below towards the region of the gall-bladder will elicit pain more frequently than the methods of Lapin-Kharitonova, Egorov and others This maneuver of an angled below could serve as an aid in the differential diagnosis between cholecystitis and ulcers of the duodenum or antrum. (Author)

Kobzarev, U. B. and Basharinov, A. E.
ON THE EFFECTIVENESS OF SEARCH ALOGORITHMS BASED ON SAMPLES OF CONTROLLED DURATION (SEQUENTIAL DETECTION) tr. by L. E. Brennan. Dec 61 [21]p. 10 refs. Rand memo. RM-2953-PR; AD-270 127.
Order from OTS or SLA $2.60 62-15514

Trans. of #Radiotekhnika i Elektronika (USSR) 1961, v. 6, no. 9, p. 1411-1419.

DESCRIPTORS: *Radar tracking, *Search radar, Effectiveness, Control, Sequential analysis, Radar signals, Detection, Probability, Radar targets

Search procedures are considered which employ trial steps (samples) of controlled duration. Indices are defined which characterize the effectiveness of these controlled search procedures. The influence of the capacity (i.e., variety of forms of signal) on these indices is estimated. It is shown that controlled search techniques can improve the efficiency of signal detection. In particular, for a given frame time, controlling the direction of search allows one to reduce the average radiated power. Allowing a variety of possible signal forms (the capacity permitted in delay time and doppler spread, fluctuations in signal intensity) reduces the gain achieved by using controlled search procedures.

Miyake, Isamu.
VITAL STAINING OF TRICHOPHYTIC FUNGI, tr. by William Himel. 4 May 59, 41p. (1 fig. omitted) 19 refs.
Order from OTS or SLA $4.60 59-16153

Trans. of Hifu-ka Oyobi Hinyô-ka Zasshi (Japan) 1925, v. 25, no. 5, p. 343-361

DESCRIPTORS: *Fungi, *Biological stains, Growth, Inhibition, Dyes, Inorganic substances, Effectiveness, Culture media, Skin, Diseases, Fungus infections.

With 13 kinds of stains, we performed vital staining on five kinds of trichophytic fungi and endeavored to explain the staining mechanism by including results obtained in other experiments. (Author)

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS, MINISTRY OF HIGHER AND SPECIALIZED SECONDARY EDUCATION, RADIO ENGINEERING SERIES, 1961, VOL. 4, NO. 4. 29 Mar 62 [170]p. JPRS: 13233.
Order from OTS or SLA $12.00 62-23789

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Radiotekhnika (USSR) 1961, v. 4, no. 4, p. 369-511.

DESCRIPTORS: *Radio equipment, Engineering, Circuits, Electrical networks, Digital systems, Trigger circuits, Radar equipment, Range finding, Radar receivers, Transistors, Radio waves, Voltage regulators, Electron beams, Focusing, Ions, Magnetic fields, Electrostatic fields, Signals, Modulation, Distortion, Frequency modulation, Oscillators, Amplifiers, Frequency, Feedback, Oscillation,

Waveguides, Transformers, Pulse generators, Waveform generators, Electronic switches, Neutralization Electrostatic capacitance, Chemistry, Engineering personnel, Personnel, Training, *Electrical engineering.

Contents:
Ideal elements in the equivalent circuit of a linear series four-terminal network, by Yu. T. Velichko
A study of triggers and registers for the amplitude-sensing unit of a digital automatic system, by M. S. Neiman, L. I. Telyatnikov and G. P. Zemtsov
Derivation of the parameters of the equivalent four-terminal network from the matrix for a many-terminal system, by A. A. Tyutin
Joint effect of signal and fluctuation noise on the receiver in a frequency-modulation radar range system, by A. A. Zhukovskii,
Calculation of circuits containing series-connected transistors, by E. N. Andrienko
Use of phase methods in studies of field fluctuation for radio waves in a turbulent medium, by G. A. Karpeev, and others
Excitation of surface waves by a localized source on a surface, by M. S. Bobrovnikov, R. P. Starovoitova and V. P. Smirnov
Best operating conditions for voltage stabilizers, by A. M. Altukhov,
Ion focussing for a flat electron beam by Yu. D. Zharkov
Suppression of undesirable signal modulation and improved selectivity, by A. P. Zelenin
Effects of nonlinear phase characteristics on signal distortion in frequency modulation, by I. Ya. Latyshev
Derivation of the harmonic components of the currents in a transistor operating as an oscillator, by S. M. Gerasimov
Effects of feedback on the frequency response of an untuned amplifier, by V. I. Pampuro
A means of altering oscillation frequencies, by E. T. Skorik, and M. A. Molyavko
An experimental study of waveguide and coaxial matching transformers by means of symmetrical analogs, by N. M. Sovetov, V. A. Klimov and E. I. Nefedov
Source of pulses of adjustable shape, by A. I. Petvenko, and V. D. Ermak
A probe-type line with electronic switching, by A. V. Men', I. N. Zhuk and N. I. Dudarev
Calculation of magnetic focussing for an electron beam in a retarding electrostatic field, by N. S. Zinchenko
Use of neutralization circuits in compensating changes of dynamic input capacitance, by M. P. Pomytkin
Chemistry and radio engineering, by E. I. Akhumov and others
Training of radio engineers, by M. V. Butrov, V. A. Volgov, and S. A. Suslonov
Syllabuses of radio engineering faculties, by A. A. Rizkin, I. I. Shumlyanskii and M. K. Khromykh
Letter to the editors, by E. V. Markhai
Discussion on Professor Neiman's paper
Training of radio engineers, by V. T. Frolkin
Resolution of the council of the radio engineering faculty at the Ordzhonikidze Aviation Institute, Moscow, by R. Granovskaya
Suggestions from the department of theoretical radio engineering, Bonch-Bruevich Communications Engineering Institute, Leningrad, by V. F. Kushnir
Suggestions from the department of radio transmitting equipment, Bonch-Bruevich Communications Engineering Institute, Leningrad, by A. S. Labkovskaya

Volynskii, Ya. M.
IMMEDIATE AND REMOTE RESULTS OF GASTRIC RESECTION FOR CANCER, tr. by L. Summerfield. Address to the Oblast Conference of Surgeons, Kalinin City, Mar 60. [1961] [7]p. (2 tables omitted) 4 refs.
Order from OTS or SLA $1. 10 62-13977

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 99-101.

DESCRIPTORS: *Cancer, *Stomach, *Surgery, Therapy, Diagnosis.

Study of the results of gastric resection as recorded by the surgical department of the Kimri No. 1 Municipal Hospital yields the following conclusions. Radical operation led to cure of 43. 4 per cent of patients who were followed for more than five years. Our findings on the proximate and remote results of gastric resection for cancer agree with the data of the large surgical establishments of our country. Admission into hospital of patients in the early stages of gastric cancer will enable the remote results of operative intervention to be improved considerably. (Author)

Yakovleva, S. D.
PROBLEM OF EXPERIMENTAL LEUKAEMIA: PATHOGENIC EFFECT OF BONE MARROW FILTRATES FROM PATIENTS WITH ACUTE LEUKAEMIA. [1961] [8]p. 5 refs.
Order from OTS or SLA $1. 10 62-13951

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 599-602.

DESCRIPTORS: *Leukemia, *Etiology, Transmission, *Bone Marrow, Spleen, Liver, Mice.

The bone marrow of patients who had died from acute leukaemia contained a filtrable pathogenic factor capable of producing disease in the majority of new-born white mice. The clinical picture of the disease, the lengthy incubation period (from 15 days to 3 months), the pathoanatomical changes in the organs of the dead animals and character of the changes in the blood point to the leucosis-like nature of the disease. Extracts prepared from the liver and spleen of animals which died from this disease also displayed pathogenic activity and were, in turn, capable of producing similar disease and death of some of the mice infected. (Author)

Zargarli, F. I.
PEPTIC ULCERS IN YOUNG PEOPLE. [1961] [6]p.
Order from OTS or SLA $1. 10 62-15335

Trans. of Klinicheskaya Meditsina (USSR) [1956] v. 34, no. 4, p. 35-38.

DESCRIPTORS: *Peptic ulcers, Age, *Therapy, *Surgery.

Peptic ulcer disease in the young tends not to yield to conservative management and there is a great frequency of complications. The indications for surgery in the youthful peptic ulcer patients should be the standard ones, not narrowing them because of youth. The end results of gastric resections performed on youthful peptic ulcer patients are good. (Author)

Zyubbarov, A. A.
CLINICO-ROENTGENOLOGIC OBSERVATIONS ON PATIENTS WITH UNOPERATED GASTRIC POLYPS, tr. by Paul V. DePorte. 7 July 59, 60p. (14 figs. omitted) 45 refs.
Order from OTS or SLA $5.60 59-18223

Trans. of A[kademiya] M[editsinskikh] N[auk] SSSR. Institut Onkologii. Trudy, 1958, v. 2, p. 256-276.

DESCRIPTORS: *Stomach, Mucous membrane, *Diseases, Growth, *Cancer, Diagnosis, *X-rays, *Etiology.

Pharmacology and Toxicology

ARMY MEDICAL COURSE ON THE TOXICOLOGY OF WAR GASES AND BIOLOGICAL WARFARE AGENTS, CHAPS. 11-13. 15 June 61 [18]p. JPRS: 9475.
Order from OTS or SLA $1.60 62-19448

Trans. of mono. Cours de Medecine d'Armée Relatif a la Toxicologie des Gaz de Combat et des Agent de la Guerre Biologique, Brussels, 1959, p. 115-134.

DESCRIPTORS: *Chemical warfare agents, *Biological warfare agents, Toxicity, *Biological warfare, Warfare, Botulism, Bacillus anthracis, Plague, Glanders, Melioidosis, Tularemia, Spirochetes, Shigella infection, Brucellosis, Virus pneumonia, Bacterial toxins, Detection, Safety, Countermeasures.

Contents:
Biological warfare
Biological agents
Protection against bacteriological weapons.

CZECHOSLOVAK MINISTRY OF HEALTH DIRECTIVES ON INOCULATION AGAINST CONTAGIOUS DISEASES (NO. HE-3801-10.12.60). 24 July 61 [23]p. JPRS: 4798.
Order from OTS or SLA $2.60 62-19534

Trans. of Ministerstvo Zdravotnictvi. Prague. Vestnik (Czechoslovakia) 1961, v. 9, no. 7, p. 70-79.

DESCRIPTORS: *Preventive medicine, *Immunization, Infections, Children, Tuberculosis, Typhoid fever, *Diseases, Czechoslovakia.

INFORMATION ON THE FIELD OF PHARMACEUTICS IN POLAND. 15 Jan 62 [32]p. JPRS: 11975.
Order from OTS or SLA $3.60 62-19608

Trans. of Farmacja Polska, 1961, v. 17, no. 18, p. 371-376; partial trans. (some sections summarized) of no. 15/16, p. 314-317, 330-331.

DESCRIPTORS: *Pharmacology, Drugs, Medicine, Poland.

Contents:
Activities of the pharmaceutical department of the Medical Academy in Warsaw (1945-60) by Wladyslaw Wisniewski
Congress of delegates of the pharmaceutical section held at Katowice on 18 Apr 61
Activities of the pharmaceutical department of the Medical Academy in Lodz (1945-60) by Robert Rembielinski.

NATIONAL CONFERENCE OF THE SCIENTIFIC PHARMACEUTICAL SOCIETIES OF BULGARIA (NO. 3) TURNOVO, 1961. 16 Mar 62 [9]p. JPRS: 13015.
Order from OTS or SLA $1.10 62-23614

Trans. of Farmatsiya (Bulgaria) 1961, v. 11, no. 5, p. 3-5.

DESCRIPTORS: Conferences, *Pharmacology, *Bulgaria.

PHARMACEUTICS IN BULGARIA. 19 Jan 61 [8]p. JPRS: 6606.
Order from OTS or SLA $1.10 62-19393

Trans. of Farmatsiya (Bulgaria) 1960, v. 10, no. 2, p. 26-30.

DESCRIPTORS: *Pharmacology, *Drugs, Scientific research, Documentation, Literature.

Contents:
Activities of the Scientific Research Institute on Pharmacy (NIIF) by L. Tomasini
The organization of effective scientific and technical information and documentation on pharmacy, by T. Trandafilov and Lyub Yonchev.

PHYSIOLOGICAL RESEARCH IN RUMANIA. 31 July 61 [125]p. JPRS: 9643.
Order from OTS or SLA $10.10 62-19543

Trans. of [Academia Republicii Populare Romine. Institutul de Fiziologie Normala si Patologica]. Studii si Cercetari de Fiziologie (Rumania) 1960, v. 5, no. 2, p. 321-325, 341-345, 349-352, 355-367, 389-396, 405-408, 421-427, 429-432, 435-441; no. 3, p. 466-471, 515-519, 565-569, 587-596, 601-609.

DESCRIPTORS: *Physiology, *Oximes, Pyridines, *Drugs, *Pharmacology, Muscles, Therapy, *Cholinesterase, Toxicity, Conditioned reflex, *Anesthetics, Blood proteins, Poisoning, *Nervous system, *Acetylcholines, Histamines, Insulin, Hemolysins, Immunization, *X-rays, Prothrombin, Proteins, Thyroid gland, Hemagglutinins, Lungs, Blood circulation, Hexonium.

Contents:
Pharmacological properties of an oxime: Phenacyl-oxime pyridine chloride. Note IV.
Action on striated muscle relations with cholinesterase and toxicity, by L. Chiosa and others
Modification of interoceptive conditional reflexes under the influence of xylocaine, by I. Rosner
Serum proteins in atophan poisoning, by P. Groza and M. Gardev
Comparative research on non-specific pharmacodynamics of neuroplegic drugs. II.
The pharmacodynamic action of hexamethone (hexanium) on effector organs and on the nervous system, by S. Simionescu-Carapancea and others
Contributions to the study of relationships between acetylcholine and histamine, by S. Fotino and D. Berceanu
The influence of insulin on cholinesterase and muscular reactivity, by A. Crainiceanu and others
Variations of the hemolytic complement of serum during primary immunization in rabbits treated with X-rays, by D. Petrescu and others
Modifications of the prothrombin complex under the influence of X-rays, by Elena Dumitrescu-Papahagi and others
Research on the variations of proteinemia during the active immunization process in rabbits irradiated with X-rays, by E. Ghizari and others
Functional orientation in occupational medicine, by Gr. Benetato
The variations of acetylcholine concentration in the thyroid gland of guinea pigs under stress, by B. Rosner and N. Sterescu
The formation of agglutinin during the secondary immune response in rabbits irradiated with X-rays, by D. Petrescu and others
Comparative research of nonspecific pharmacodynamics of neuroplegic drugs.
III. Pharmacodynamic action of pentamethone (penthonium) on effector organs and on the nervous system, by S. Simionescu-Carapancea and others
Research on the mechanisms of hemodynamic modifications brought about by acetylcholine in the pulmonary circulation, by A. Faibis and M. Faibis.

RECENT SOVIET POLICIES AND METHODS IN PHARMACY. 20 Mar 62 [12]p. JPRS: 13069.
Order from OTS or SLA $1.60 62-23646

Trans. of Aptechnoe Delo (USSR) 1961, v. 10, no. 5, p. 3-8.

DESCRIPTORS: *Pharmacology, Labor, Public health.

Contents:
Congress of the CPSU (no. 22)
Brigades of Communist labor in the pharmacies, by A. M. Sidorkov and M. M. Lebedeva.

Droszcz, Waclaw and Ajewski, Zygmunt.
AEROSOLS IN THE TREATMENT AND DIFFERENTIATION OF THE DISEASES OF THE RESPIRATORY ORGANS. 11 Aug 61 [12]p. JPRS: 8723.
Order from OTS or SLA $1.60 62-19474

Trans. of Polski Tygodnik Lekarski, 1961, v. 16, no. 15, p. 566-570.

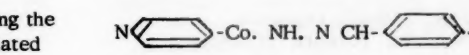
DESCRIPTORS: *Aerosols, *Therapy, *Respiratory diseases, Drugs, *Bronchodilators, ACTH, Diagnosis, Epinephrine, Mucus, Inhibition, Iodides, Bactericides, Adenine.

Dzurov, G.
BULGARIAN ANTITUBERCULAR MEDICAMENT NO. 17. 24 Jan 62 [16]p. JPRS: 12094.
Order from OTS or SLA $1.60 62-19659

Trans. of Suvremenna Meditsina (Bulgaria) 1961, v. 12, no. 1, p. 51-60.

DESCRIPTORS: *Tuberculosis, Drugs, Chemotherapeutic agents, *Isoniazid, Therapy, Toxicity, Bulgaria, *Hydrazines.

The preparation, also known as p-acetaminobenzaldehyde-isonicotylhydrazine, or INHA-17, is a yellow crystalline powder, insoluble in water, alcohol and ether, whose melting temperature is 178-181°C and whose chemical structure is



In cases of fresh and relatively fresh tuberculosis the new drug's curative effect (intoxication elimination in 93.3% of the cases, favorable effect on the X-ray picture in 87% of the cases, cavity closing in 46% of the cases, destruction of bacilli in 60% of the cases, and development of initial resistance by the tubercle bacillus in only 15% of the cases) proved superior to that of isoniazid, streptomycin and most isonicotylhydrazine preparations which were heretofore considered the most powerful antitubercular medicaments. No 17 is better tolerated than isoniazid, streptomycin, thiosemicarbazone, PAS and some isonicotylhydrazine preparations.

Jakimowska, Krystyna.
PHARMACOLOGICAL PROPERTIES OF SOME BORONS (Wlasciwosci Farmakologiczne Niektorych Aromatycznych Zwiazkow Boru). 7 Aug 61 [12]p. JPRS: 9808.
Order from OTS or SLA $1.60 62-19576

Trans. of Acta Physiologica Polonica, 1961, v. 12, no. 1, p. 173-180.

DESCRIPTORS: *Boron compounds, *Drugs, *Pharmacology, Blood pressure, Nervous system, Microorganisms.

Boron in the form of $B\begin{matrix}OH\\OH\end{matrix}$ was introduced into benzene, toluene, and benzoic acid. In benzene it was borophenylic acid (T-500); in toluene it was O-methylborophenylic acid (T-507), M-methylborophenylic acid (T-508), and P-methylborophenylic acid (T-509); and in benzoic acid it was M-carboxyborophenylic acid

(T-510) and P-carboxyborophenylic acid (T-511). The intravenous LD_{50} for mice was 221 mg/kg for T-500, 181 mg/kg for T-507, 167/mg/kg for T-508, 172 mg/kg for T-509, and orally it was more than 3g/kg for T-510 and T-511. The action of each preparation on rabbits and cats under urethan anaesthesia was similar. Immediately after the preparation was injected there was a brief rise in blood pressure followed by a slight drop. Cardiometer curves showed increased tension of the cardiac muscle with a simultaneous fuller diastolic expansion. Expulsion and minute volume did not change and lowered pressure was not reflected on the curve. Borophenolic acid and its three methyl derivatives caused the dilation of blood vessels of a rat after their momentary contraction. The increase in heart volume is probably caused by the increased inflow of blood as a result of the contraction of the veins. T-500, T-507, T-508, and T-509 showed a potentialization effect in anesthesia, but only in large doses. None of the substances showed any effect in arresting conditioned reflexes.

Kharkevich, D. A. and Kravchuk, L. A.
ON THE PHARMACOLOGY OF A NEW CURARE-LIKE PREPARATION "TRUXYLONIUM". 20 Nov 61 [15]p. 9 refs. JPRS: 11144.
Order from OTS or SLA $1.60 62-13527

Trans. of Farmakologiya i Toksikologiya (USSR) 1961 v. 24, no. 3, p. 318-324.

DESCRIPTORS: Drugs, *Muscle relaxants, Stimulation, *Vagus nerve, Toxicity, *Curare.

Truxylonium, a derivative of cyclobutane-dicarbonic and alpha-truxyllic acids, is a white fine-crystalline powder, water soluble in a ratio of 1:200 at 20-25°. The pH of a 0.5% solution equals 6.4. Chemically, truxylonium represents an alpha-truxyllic acid piperydylbutanol ether diiodoethylate. The effect of this preparation on neuromuscular transmission was investigated mainly in experiments on rabbits on whom the symptom of bending the head was determined, and on decerebrated cats. Truxylonium represents an active myorelaxant of brief action. It belongs to the group of curare-like substances with a concurrent type of action. As its antagonist, proserine and other anticholinesterase preparations can be employed. Truxylonium blocks the transmission of stimulation from n. vagus to the heart. In regard to the sympathetic ganglions it possesses moderate ganglioblocking properties. The toxicity of the preparation is low.

Marek, S.
PLAN FOR LONG-RANGE DEVELOPMENT OF CZECHOSLOVAK PHARMACEUTICAL SERVICES. 12 June 61 [11]p. JPRS: 4689.
Order from OTS or SLA $1.60 62-19387

Trans. of Farmaceuticky Obzor (Czechoslovakia) 1961, v. 30, no. 2, p. 58-64.

DESCRIPTORS: *Pharmacology, Public health, Preventive medicine, Drugs, Production, *Czechoslovakia.

Naalsund, Odd.
TRICHLOROETHYLENE POISONING (Trikloretylen-forgiftning). [1961] [8]p. (foreign text included) 8 refs.
Order from SLA $1.10 62-14039

Trans. of Nordisk Medicin (Sweden) 1954, v. 51, no. 11, p. 376-377.

DESCRIPTORS: *Poisoning, *Vinyl chlorides, Toxicity, Diagnosis, Ethylenes, Chlorides.

The purpose of this communication is briefly to call attention to trichloroethylene poisoning and at the same time to indicate the pyridine-alkali reaction, as it is called, as a simple and practical method for verifying the diagnosis. (Author)

Raucher, C.
INTERREGIONAL CONFERENCE ON HEALTH PROBLEMS IN THE RUMANIAN CHEMICAL INDUSTRY, CLUJ, 26-28 SEP 60. 6 June 61 [5]p. JPRS: 4679.
Order from OTS or SLA $1.10 62-19407

Trans. of Igiena (Rumania) 1961, v. 10, no. 1, p. 89-91.

DESCRIPTORS: *Industrial medicine, Conferences, *Chemical industry, Preventive medicine, Public health, Rumania, Toxcity.

Torf, S. F., Khromov-Borisov, N. V., and Indenbom, M. L.
METHYLDIAZYL, METHYLDIPHACYL, AND THEIR AMMONIUM SALTS. 27 Feb 62 [17]p. 19 refs. JPRS: 12705.
Order from OTS or SLA $1.60 62-19761

Trans. of Meditsinskaya Promyshlennost' (USSR) 1961 [v. 15] no. 12, p. 19-25.

DESCRIPTORS: *Vasomotor drugs, *Piperidines, *Methyl radicals, Acetic acids, Esters, Acetycholines, Cholinesterase, *Thiazines, Pharmacology.

The synthesis is described of the hydrochloride of 1-diethylaminoisopropyl ester of benzilic acid (methyldiazyl) and the hydrochloride of 1-diethylaminoisopropyl ester of diphenylacetic acid (methyldiphacyl) which differ from the known medicinal preparations amizyl (diazyl) and spasmolytin by the presence of a methyl radical in the diethylaminoalkyl group. The synthesized preparations were tested for both their muscarinolytic and nicotinolytic actions, and for the degree of their cholinolytic activity as compared with their analogs containing no methyl radicals. To study the effect of alkyl radicals $-N(C_2H_5)_2$ and $-N(CH_3)_2$ on the degree of cholinolytic activity in this series of compounds, the hydrochloride of 1-dimethylaminoisopropyl ester of diphenylacetic acid was also synthesized. In addition to that the methyl iodides of methyldiazyl and methyldiphacyl bases were synthesized. (Author)

MEDICAL RADIOLOGY, 1961, VOL. 6, NO. 10.
25 Jan 62 [168]p. refs. JPRS: 12102.
Order from OTS or SLA $12.00 62-15652

Trans. of Meditsinskaya Radiologiya (USSR) 1961, v. 6, no. 10, p. 3-96.

DESCRIPTORS: *Radiobiology, *Cancer, Radiation effects, Radioactive isotopes, Iodine, *Hyperthyroidism, *Bone, X-rays, Blood, *Radiation injuries, Diseases, *Gynecology, Safety, Personnel, Dosimeters, Uranium, *Hemopoiesis, *Radiation sickness, *Bone marrow, *Tuberculosis, Tuberculosis vaccine, Metabolism, *Gamma rays, Viruses, *Immunization, Spirochetosis, Dose rate, *Salivary glands, Radiological physics, *Skeleton, Luminescence, *Radioprotective drugs, *Leukopenia.

Contents:

Results of radiation therapy of cancer of the organs of the oral cavity and accessory nasal sinuses, by A. V. Kozlova
The significance of factors in the accumulation and elimination of I^{131} in radioiodine therapy of thyrotoxicosis, by Yu. E. Livergant and E. D. Chebotareva
Radiation and combined treatment of patients with osteogenic sarcomas, by G. G. Mitrov
X-ray therapy of bone sarcomas, by L. A. Dunaeva
The diagnostic significance of changes in the peripheral blood in occupational radiation injuries, by D. G. Zografov
The prophylaxis of radiation injuries from the use of I^{131} and Au^{198} in clinical practice, by D. A. Ulitovskii
The problem of protection against radiation in curietherapy of diseases of the female genital organs, by I. Berta and Ya. Felserfalvi
Safety of personnel giving intracavitary radiation therapy, by Yu. Kh. Sarkisyan and G. A. Zubovskii
The tasks of dosimetric control in working with uranium and uranium-containing products, by O. S. Andreeva
Stimulation of hematopoiesis in acute radiation sickness by intravenous injections of bone marrow, by L. S. Rogacheva and L. L. Shepshelevich
The effect of vaccination against tuberculosis on the course of the tuberculous process under conditions of chronic irradiation, by T. A. Khudushina
The mechanism of disturbance in serotonin metabolism in acute radiation sickness, by G. A. Chernov and L. M. Morozovskaya
The effect of large doses of gamma-rays on certain properties of viruses, by T. A. Bektemirov
Vaccinal immunity against leptospirosis in irradiated spotted sousliks, by V. P. Morozova
Calculation of the total integral dose in local X- and gamma-irradiation, by R. G. Mimin and R. Kh. Tenishev
The scintigraph (an instrument for investigation of the location of radioactive isotopes in the human body, by A. Stefanovich
Study of the function of salivary glands by means of radioactive isotopes, by L. A. Yudin
The place of physics in radiology, by M. Tubiana
The use of Ca^{45} for the study of mineral metabolism in osteoporosis of different etiologies, by N. I. Kuznetsov
Luminescence of skeletal structures after the effect of irradiation, by A. I. Polivoda and others
"The Biological Evaluation of Preparations for the Prophylaxis and Treatment of Radiation Sickness", by D. I. Zakutinskii and L. N. Selivanova: book review by P. P. Saksanov
"Isodose Charts: The Dosage of Gamma-Radiation in Roentgens", by A. Verhagen: book review by M. Sh. Vainberg.

MEDICAL RADIOLOGY, 1961, VOL. 6, NO. 12.
23 Mar 62 [156]p. refs. JPRS: 13128.
Order from OTS or SLA $11.50 62-23577

Trans. of Meditsinskaya Radiologiya (USSR) 1961, v. 6, no. 12, p. 1-98.

DESCRIPTORS: *Radiobiology, Medicine, *Mammary glands, *Cancer, Radioactive isotopes, Gold, *Hyperthyroidism, *Lungs, Tumors, *Thyroid glands, Tissues (Biology), Serum, Radiation injuries, Heart, Radiation sickness, *Bone marrow, Cells (Biology), Transplantation, *Leukopenia, Leukocytes, Strontium, *Gamma rays, Radiation counters, X-rays, Education, *Embryos, Intestine, Absorption, Secretion, Vasomotor drugs, Excretion, Immunization.

Contents:

Preliminary data on the use of medicative colloidal gold in the combined treatment of mammary gland cancer, by M. A. Volkova and others
Interstitial employment of a colloidal solution of Au^{198} in the treatment of mammary gland cancer, by A. Sakhatchiev
Treatment of thyrotoxicosis with radioiodine in conjunction with certain thiourea compounds, by B. M. Varshavskii and Yu. E. Livergant
Radioiodine therapy of multiple metastases to the lungs associated with malignant tumors of the thyroid gland, by E. P. Falileeva
Investigation of the state of tissue blood supply by means of I^{131} in injuries of the extremities, by I. P. Vedyaev
Certain mechanisms underlying disturbed function of the myocardium in acute radiation sickness, by I. A. Pigalev, B. B. Moroz and S. P. Grozdov
Research into the adaptation of bone marrow cells of the red series transplanted in acute radiation sickness, by G. I. Kozinets and G. V. Sukyasyan
The use of polyvinyl alcohol glucose-citrate leucocyte mass in leukopenia, by S. N. Allaverdyan, E. S. Gazaryan and E. Kh. Sarkisyan
The protective action of native and purified concentrated sera of irradiated animals against radiation sickness, by A. T. Kravchenko and V. I. Fofanov
Express method of intravital determination of Sr^{90} in the organisms of man and animals, by I. B. Kerim-Markus and others
"Scintigraph" an apparatus for graphic registration of gamma-radiation, by V. Kh. Kogan and A. N. Semikholennykh
On teaching of medical radiology and scientific-methodological work of the chair of roentgenology and radiology of the Kishinev Medical Institute, by A. P. Burkalov
The organization of teaching of roentgenology and radiology, by B. N. Erofeev

On the teaching of radiology in medical institutes, by T. A. Osipkova
The reorganization of teaching of roentgenology and radiology should be started immediately, by M. P. Popov
From the editorial board
The current status of the problems of prevention of radiation injury of the fetus, by N. A. Kalinina
The effect of whole body X-irradiation on the absorptive and secretory function of the intestines, by I. Ya. Nekachaleva
Prophylactic action of cyanocobalamine in whole body irradiation, by O. V. Bukharin
Utilization of antihistaminic preparations in the treatment of experimental acute radiation sickness, by S. A. Davydova and E. N. Shcherbova
Rules and regulations of the distribution and excretion of certain medicinal substances in radiation sickness, by A. V. Smirnova
The leucocytic reaction and immunological indices in rabbits subjected to the action of X-rays, by T. G. Starkova and others
Block of immunogenesis by means of irradiation and passive specific immunity, by V. F. Sosova
Book reviews
Current events.

Baisogolov, G. D. and Gus'kova, A. K.
TWO ADDITIONAL CASES OF ACUTE RADIATION SICKNESS IN MAN. 16 Mar 62 [31]p. 15 refs.
JPRS: 13022.
Order from OTS or SLA $3.60 62-23621

Trans. of Klinicheskaya Meditsina (USSR) 1961, v. 39, no. 11, p. 43-56.

DESCRIPTORS: *Radiation sickness, Man, Radiobiology.

Gus'kova, V. N. and Bragina, A. N.
THE PROBLEM OF THE HYGIENIC CHARACTERISTICS OF THE NATURAL RADIOACTIVE BACKGROUND OF THE SOIL (K Voprosu Gigienicheskoi Kharakteristiki Estestvennogo Radioaktivnogo Fona Pochvy). 4 Jan 62, 10p. 3 refs. NIH no. 1-30-62.
Order from OTS or SLA $1.10 62-15800

Trans. of Gigiena i Sanitariya (USSR) 1958 [v. 23] no. 10, p. 32-37.
Another trans. is available from LC or SLA mi$7.20, ph$22.80 in 59-13134, JPRS(NY)-1237, 9 Mar 59, 149p.

DESCRIPTORS: *Radiation injuries, Countermeasures, *Radiobiology, Soils, Radioactive waste disposal.

The radioactivity of the soil samples studied in 1957 for β-radiation comprised for various rayons in Leningrad from 2.21×10^{10} to 2.55×10^{10} impulses per km^2 which corresponded to 1,160-1,350 mC/km^2 based on K^{40} (an average of 1,272). Approximately the same activity was found in the soils of Tallin, Vorkuta, and Slantsy. The radioactivity of these specimens was determined to be from 1,020-1,530 mC/km^2 (an average of 1,287). The magnitude of the radioactivity of soil samples collected during this same period in suburban locations varied in the majority of cases from 1,160 to 1,640. There were a few exceptions. One sample taken from a granite base had a β-radiation radioactivity of 5,000 mC/km^2. The radioactivity of the specimens with regard to γ-radiation comprised 1/5 of the β-radiation in the city, while there was more variation in suburban areas, 1/4 to 1/8. K^{40} comprises only part of the total radioactivity of the soil (from 20 to 70%). Observations on the activation and operation of one depository for solid radioactive wastes indicated that a careful check of the entire surrounding territory is required after "burial" of the radioactive substances. (Author)

Petrova, N. D., Polikarpova, L. I. and others.
PROTECTIVE EFFECT OF CHONDROITINSULFATE AGAINST LETHAL DOSES OF ROENTGEN RAYS (Zashchitnoe Deistvie Khondroitinsyl'fata ot Letal'nykh Doz Rengenovykh Luchei) tr. by Tatiana Boldyreff. 3 Nov 61 [19]p. (Eng. summary omitted).
Order from OTS or SLA $1.60 62-13485

Trans. of Med[itsinsakaya] Radiol[ogiya] (USSR) 1958, v. 3 [no. 4] p. 34-41.
Another trans. is available from CTS $3.00 in 59-11520, JPRS(DC)-672, 14 May 59, 155p.

DESCRIPTORS: *Chondroitin sulfate, Effectiveness, *Radioprotective drugs, *Mucosaccharides, *X-rays.

Chondroitinsulfate, in intra-abdominal injections 5 to 10 minutes before irradiation, in the amount of 1 mg per 1 Gm of body weight produces a slight effect on the survival of mice. With intravenous injection chondroitinsulfate 5 to 10 minutes before irradiation, in the amount of 0.25 - 1 mg per 1 Gm of body weight we observe: (a) increased survival of mice up to 40-50%; (b) quicker reconstruction of the amount of leukocytes and of the leukocyte formula in the blood; (c) more intensive regeneration of the cells of the fibroblastic series on the loose connective tissue; (d) favorable effect on the procollagen exchange (metabolism) in the skin in the early stages of irradiation disease. Protection with chondroitinsulfate has no effect on the metabolism of albumins in the liver and the muscles, after irradiation; it does not change the cellular contents of the blood and loses connective tissue during the first period of irradiation disease. (Author)

Skotnikov, V. I.
COMPARATIVE EVALUATION OF RESULTS OF SHORT-FOCAL X-RAY AND GAMMA (Co^{60}) THERAPY OF CANCER OF SKIN AND LIP, tr. by L. Summerfield. [1961] [16]p. (4 tables omitted) 32 refs.
Order from OTS or SLA $1.60 62-13976

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 93-99.

DESCRIPTORS: *Cancer, *Skin, Face, *Therapy, X-rays, Radioactive isotopes, Cobalt, Radium, Bibliography.

Comparison of the results of treatment of cancer of the skin and lip of stage I-II with radioactive cobalt

(interstitial method) and with a short-focal X-ray therapy machine reveals certain advantages of short-focal X-ray therapy. Combined treatment with radioactive cobalt and short-focus X-ray therapy in cancer of the skin of the face and lip of stage I-II has no advantage over either of the methods used separately. Given equal indications and the existence of the possibility of conducting both radium therapy and short-focal X-ray therapy, the latter method is to be preferred. (Author)

Surgery

Alekseev, N. G.
A RAPID METHOD FOR THE CYTOLOGICAL DIAGNOSIS OF MALIGNANT TUMOURS AND THEIR METASTASES IN THE COURSE OF SURGICAL OPERATIONS (Ekspressnyi Metod Tsitologicheskoi Diagnostiki Zlokachestvennykh Opukholei i Ikh Metastazov vo Bremia Khirurgicheskikh Operatsii) tr. by R. Crawford. [1961] [24]p. (2 figs. omitted) 16 refs. [NIH]-118.
Order from OTS or SLA $2.60 62-15116

Trans. of Vestnik Khirurgii (USSR) 1955, v. 76, no. 8, p. 94-103.

DESCRIPTORS: *Tumors, Diagnosis, Histology, Transport properties, *Surgery, Cancer

The proposed methods for the rapid treatment of cytological preparations make the cytological method of examination extremely rapid, and in every way suitable for express diagnosis during surgical operations. The cytological method makes it possible to examine punctates, scrapings, pus, etc., which are inaccessible to the histological method of examination. The setting up of a laboratory table in the immediate vicinity of the operation table promotes still more rapid examination. This express method of cytological diagnosis for malignant tumours and their metastases is faster than urgent histological examination.

Bakulev, A. N.
INDICATIONS AND RESULTS OF SURGICAL TREATMENT OF MITRAL STENOSIS (Pokazaniya i Rezul'taty Khirurgicheskogo Lecheniya Mitral'nogo) tr. by B. Haigh. [1961] 9p. [NIH]-27.
Order from OTS or SLA $1.10 62-15146

Trans. of Khirurgiya (USSR) 1956, v. 32, no. 4, p. 6-9.

DESCRIPTORS: *Heart, Diseases, *Surgery, Cardiac muscles, Circulatory system, Blood circulation, Arteries, Veins

Chepov, P. M.
BASIC PROBLEMS OF TRANSPLANTATION OF TISSUES AND ORGANS. 9 Mar 62 [17]p. 139 refs. JPRS: 12878.
Order from OTS or SLA $1.60 62-23331

Trans. of Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1961, v. 5, no. 3, p. 86-91.

DESCRIPTORS: *Tissues (Biology), *Transplantation, Surgery, Antigens, Growth, Blood transfusions, Preservation, Therapy.

Gorshkov, S. Z.
MODERN ACHIEVEMENTS OF TELEVISION IN SURGICAL PRACTICE. 21 Feb 62 [7]p. JPRS: 12647.
Order from OTS or SLA $1.10 62-19753

Trans. of Khirurgiya (USSR) 1961, v. 37, no. 12, p. 119-121.

DESCRIPTORS: Medical personnel, Personnel, Training, *Surgery, *Color television, Television, Effectiveness.

Popescu, Lidia.
REFLECTIONS ON PROFESSOR F. G. UGLOV. 2 Feb 62 [5]p. JPRS: 12340.
Order from OTS or SLA $1.10 62-19611

Trans. of Muncitorul Sanitar (Rumania) 1961 [v. 12] no. 44[596] p. 4.

DESCRIPTORS: *Lungs, *Cancer, *Surgery, *Medical personnel.

Rostovtsev, B. N. and Kovaleva, L. I.
ELECTRONIC HEART STIMULATOR (ES-1). 28 Feb 62, 5p. JPRS: 12838.
Order from OTS $0.50 62-11598

Trans. of mono. Novye Khirugicheskie Instrumenty i Apparaty Dlya Grudnoi Khirurgii (New Surgical Instruments and Apparatuses for Chest Surgery) Moscow, 1961, p. 20-25.

DESCRIPTORS: *Heart, *Stimulation, *Surgical instruments, Electric currents, Electrocardiography.

Ton That Tung.
SURGERY IN NORTH VIETNAM (Mo Xe O Viet Nam). 2 Jan 61 [14]p. JPRS: 7136.
Order from OTS or SLA $1.60 62-19357

Trans. of Tin Tuc Hoat Dong Khoa-Hoc [sic] (North Vietnam) 1960, no. 8, p. 8-13.

DESCRIPTORS: *Surgery, *Anesthesia, Digestive system, Heart, Blood vessels, Urinary tract, *Vietnam.

Zoology

HERRING: SELECTED ARTICLES FROM SOVIET PERIODICALS. 1961, 155p. 142 refs. P. -480 Int.
Order from OTS $1.50 60-51149

DESCRIPTORS: *Herring, *Fishes, Marine biology, Anatomy, Physiology, Food, Reproduction, Morphology Growth, Distribution, *Barents Sea, Sea of Japan, Bibliography

Contents:
Some factors determining the abundance of Clupeidae, by A. N. Svetovidov (Akademiya Nauk SSSR. Ikhtiologicheskaya Komissiya. Trudy Soveshchanii, 1953, v. 1, p. 99-109)
Herring of the Barents Sea, by Z. A. Borodatova (Nauchnyi Institut Rybnogo Khozyaistva [Moscow]. Trudy (USSR) 1930, v. 5, no. 4, p. 45-53)
The catches of small Kandalaksha herring in Spring 1929, by I. M. Gerasimov ([Vsesoyuznyi Nauchno-Issledovatel'skii Institut Ozernogo i Rechnogo Rybnogc Khozyaistva]. Izvestiya (USSR) 1931 [v. 11] no. 2, p. 42-50)
The herring with low vertebral count (Clupea Harengus Pallasi Val.) of the Barents and Kara Seas, by V. K. Esipov (Polyarnyi Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii Trudy (USSR) 1938, v. 1, p. 149-159)
The reproduction and life-cycle of the Murman herring (Clupea Harengus Harengus L.) by T. S. Rass (Polyarnyi Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii. Trudy (USSR) 1939, v. 6, p. 93-159)
Morphophysiological characters of the Kara Sea herring, by M. E. Makushok (Zoologicheskii Churnal (USSR) 1938, v. 17, no. 4, p. 678-685)
The abundance of South Sakhalin herring, by A. N. Probatov (Akademiya Nauk SSSR. Ikhtiologicheskaya Komissiya. Trudy Soveshchanii, 1953, v. 1, p. 110-123)
Biology of foraging herring inhabiting the waters of southwestern Kamchatka and the northern Kuril Islands, by I. A. Piskunov (Voprosy Ikhtiologii (USSR) 1955, no. 4, p. 63-70)
Distribution and abundance of spawning herring near the eastern coasts of the Sea of Japan, by A. N. Probatov (Akademiya Nauk SSSR. Zoologicheskii Institut. Trudy Problemnykh i Tematicheskikh Soveshchanii, 1956, v. 6, p. 140-143).

"VETERINARSKI ARHIV", VOLS. 22, 26 AND 28: SELECTED ARTICLES, tr. by Ada Weinrebe. 1962, 34p. 36 refs. PL-480 agr.
Order from OTS $0.50 60-21682

Trans. of Veterinarski Arhiv (Yugoslavia) 1952, v. 22, no. 3/4, p. 151-156; no. 9/10, p. 375-377; 1956, v. 26, no. 7/8, p. 192-201; 1958, v. 28, no. 7/8, p. 236-242.

DESCRIPTORS: *Bees, *Insects, *Diseases, Etiology, Bacteria, Food, Growth, *Streptococcus infections, Culture media, Thiamine, Veterinary medicine.

Contents:
The significance of larval food in the etiology of American and European foulbrood of the honeybee, by S. Matuka and E. Topolnik
Further investigations in the occurrence of Sc. liquefaciens in European foulbrood of the honeybee, by I. Tomasec
The culture of B. larvae on a medium containing thiamine, by S. Matjka and E. Topolnik
On pluton forms in the microscopical picture of European foulbrood, by I. Tomasec.

Anastos, George.
THE TICKS, OR IXODIDES, OF THE U.S.S.R.: A REVIEW OF THE LITERATURE. 1957, 397p. 1248 refs. PHS Pub-548.
Order from OTS $6.00 62-11646

DESCRIPTORS: *Ticks, Parasites, Insects, Geography, Distribution, Ecology, Climatic factors, *Diseases, Man, Animals, *Parasitology, *Bibliography.

The information is taken entirely from the extensive literature available. Under each species is presented information concerning the synonymy, the geographical distribution and host distribution, the hosts of the various stages, the seasonal activity, the habitat, the life cycle, the habits, the control measures against the tick species, the parasites of the ticks and the relation to human and animal diseases. (Author)

Beker-Migdisova, E. E.
A NEW GENUS OF BORISROHDENDORFIA (HOMOPTERA) FROM THE KUZNETS SERIES OF THE KUZNETS BASIN. [1961] [4]p. 3 refs.
Order from OTS or SLA $1.10 61-27881

Trans. of Palentologicheskii Zhurnal (USSR) 1959, no. 3, p. 138-140.

DESCRIPTORS: *Insects, Paleoecology, *Homoptera.

In the materials collected by the Kuzbass Paleoentomological Expedition in 1957 there was found a very interesting insect wing, with coloring preserved in the form of spots inside the cells. A description of this form is given. (Author)

Dmitriev, N. A.
BIOLOGICAL DIFFERENCES AND SIMILARITIES BETWEEN THE WHITE SEA HERRING AND THE BALTIC HERRING (Razlichie i Skhodstvo Biologicheskikh Priznakov Belomorskikh Sel'die i Baltiiskoi Salaki). 1962, 8p. 9 refs. PL-480 Int.
Order from OTS $0.50 61-31039

Trans. of Vsesoyuznyi Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii. Trudy (USSR) 1958, v. 34, p. 178-184.

DESCRIPTORS: *Herring, *Baltic Sea, *White Sea, Biology, Indentification, Fishes, Marine biology, Reproduction

The White Sea herring and the Baltic herring are the most extreme forms of herrings with low and high vertebral counts, respectively. They are typical endemic forms of marginal, semilandlocked water bodies, and have a larger number of biological similarities than the Pacific and the Atlantic herrings. This similarity in biological characteristics is determined by the type of behavior of the White Sea and the Baltic herrings, their spawning conditions, etc. At the same time there are also considerable biological differences between these two forms; in particular, the Baltic herring grows more rapidly and has a higher fecundity than the small White Sea herring. The herring fishery resources of the White Sea and the Baltic Sea differ in their quantitative composition, owing to the difference

in the environmental conditions. The Baltic herring has more favorable environment, especially in winter, when the Baltic Sea does not usually cool below the surface layers, whereas the entire water mass of the White Sea cools down. The White Sea herring resources are at a considerably lower level than those of the Baltic herring. (Author)

Dvinin, P. A.
DOWNSTREAM MIGRATION OF YOUNG PINK SALMON (ONCORHYNCHUS GORBUSCHA WALBAUM) IN THE RIVERS OF SAKHALIN (Nekotorye Osobennosti Molodi Gorbushi (Oncorhynchus Gorbuscha Walbaum) pri Skate iz Sakhalinskikh Rek v More). 1962, 4p. 4 refs. PL-480 Int.
Order from OTS $0.50 61-31043

Trans. of Zoologicheskii Zhurnal (USSR) 1959, v. 38, no. 8, p. 1268-1269.

DESCRIPTORS: *Salmon, Reproduction, Growth, Temperature, Climatic factors, *Food

Galushin, V. M.
DATA ON THE NESTING OF THE EUROPEAN SHORT-TOED EAGLE IN THE RYAZAN REGION (Nekotorye Dannye po Gnezdovaniyu Zmeeyada v Ryazanskoi Oblasti). 1962, 5p. 14 refs. PL-480 Int.
Order from OTS $0.50 61-31051

Trans. of Ornitologiya (USSR) 1959, no. 2, p. 153-156.

DESCRIPTORS: *Birds, Reproduction, Food, Anatomy, Physiology, Growth

Mimura, Koya.
STUDY OF THE FISHING CONDITION OF THE YELLOWFIN IN THE INDIAN OCEAN, ESPECIALLY ON THE ANNUAL DIFFERENCES OF THE HOOKED-RATE AND SIZE COMPOSITION, tr. by Grace Y. Beard. Contribution no. 103. [1959] [22]p. 5 refs.
Order from OTS or SLA $2.60 59-18378

Trans. of [Nankai-ku Suisan Kenkyusho Hokoku] (Japan) 1958, no. 7, p. 59-71.

DESCRIPTORS: *Fishes, *Indian Ocean, Abundance, Sizing, Fisheries.

Sahlin, B.
DE NERTS (The Mink) tr. by Mrs Funneman. 4p. MTWL: 1093 (text in Dutch).
Order from OTS or ETC $1.40 62-26050

Trans. of Svensk Jakt (Sweden) 1961, v. 10, p. 456-457.
DESCRIPTORS: *Minks, Fishes, Food.

Sykhoverkhob, F., and Krymova, R.
DE INVLOED VAN KOBALTZOUTEN OP DE GROEI VAN KARPER (Effect of Cobalt Salt on the Growth of Carp) 7p. MTWL: 1071 (text in Dutch).
Order from OTS or ETC $1.55 62-26011

Trans. of Rybovodstvo i Rybolovstvo (USSR) 1961, no. 1, p. 18-19.

DESCRIPTORS: *Cobalt compounds, Salts, Fishes, *Food.

CHEMISTRY

JOURNAL OF APPLIED CHEMISTRY, 1945, VOL. 18, NO. 9/10: [TABLE OF CONTENTS AND SELECTED ABSTRACTS]. [1961] 7p. 14 refs.
Order from OTS or SLA $1.10 62-14164

Abstract trans. of Zhurnal Prikladnoi Khimii (USSR) 1945, v. 18, no. 9/10, p. 469-473, 505-507, 518-520, 534-547, 556-570, 572-575.

DESCRIPTORS: *Chemistry, Abstracting, Metallurgy, Chemical engineering, *Activated carbon, Oxidation, Inflammable materials, Temperature, *Carborundum, *Pipettes, Automatic, Adsorption, Gases, Absorption, *Coal tar, *Peat, Density, *Acetones, Oxidation, Potassium compounds, Manganates, *Organic compounds, *Alkyl radicals, Sulfur compounds, Chlorides, Amides, *Bentonite, Clays, Chemical industry.
Contents:
Aleksandr Aleksanfrovich Baikov and his significance ir Soviet chemistry and metallurgy, by Yu. V. Baimakov
Apparatus for determination of the temperature of inflammation and of the kinetics of oxidation of active carbons, by E. V. Alekseevskii and Ya. D. Musin
Suspension ultrafilters, by S. G. Mokrushin
An automatic pipet, by A. G. Kul'man
Desorption of solvents from activated carbon with inert gases, I., by N. D. Gorchakov and I. I. Pogodin
Character of the dependence of the elementary composition of primary peat tar upon its specific gravity, by B. R. Eidus
Oxidation of diacetone -L-sorbose with potassium manganate, by V. M. Tursin and M. I. Rusakova
Structure and germicidal activity of organic compounds. II. Alkyl sulfodichloramides, by N. N. Mel'nikov and others
Sorption properties of natural bentonite clays of Georgia, by G. A. Tsitsishvili and I. Z. Arevadze.

JOURNAL OF APPLIED CHEMISTRY, 1945, VOL. 18, NO. 11/12: [TABLE OF CONTENTS AND SELECTED ABSTRACTS]. [1961] 7p. 4 refs.
Order from OTS or SLA $1.10 62-14165

Abstract trans. of Zhurnal Prikladnoi Khimii (USSR) 1945, v. 18, no. 11/12, p. 581-608, 644-646, 658-685, 690-698, 718-724.

DESCRIPTORS: *Chemistry, Abstracting, *Absorption, *Adsorption, Mixtures, *Alkylation, Ammonia, *Amines, *Aldehydes, Ketones, *Butyl radicals, *Vapors, Recovery, *Steam, *Activated carbon, Solvent action, *Gases, *Sodium compounds, *Fluorides,

*Silicate, Colloids, *Zinc compounds, *Sulfates, Solutions, Purification, Copper, Cadmium, *Hydrogen compounds, *Sulfides, Ethanes, Sulfonates, Organic compounds, *Gold, Aliphatic compounds, *Tuberculosis, Therapy, Synthesis.

Contents:
A. E. Favorskii, by Yu. S. Zal'kind
Dynamics of sorption of mixtures, by O. M. Todes
Reductive alkylation of ammonia and amines by aldehydes and ketones. II. Preparation of butylamines from normal butyraldehyde, by A. M. Grigorovskii and R. S. Margolina
Research on recovering vapors of volatile solvents with solid sorbents. XI. Desorption of solvents from solid sorbents with steam (theory of desorption) by E. V. Alekseevskii and Z. S. Vanyushina
Desorption of solvents from activated carbon with inert gases, II, III, by N. D. Gorchakov and I. I. Pogodin
Effect of colloidal stabilizers on the wetting of a hydrophobic surface by an aqueous suspension of sodium fluosilicate and upon its washing off, by N. F. Ermolenko and V. S. Kodenskaya
Purification of technical solutions of zinc sulfate by removing copper and cadmium with hydrogen sulfide, by V. V. Gromov and Ya. P. Borodulin
Synthesis of antitubercular organic compounds of gold; Aliphatic autothiosulfonates, by I. M. Lipovich.

Akopyan, A. E., Ordyan, M. B., and Ekmekdzhyan, S. P.
A METHOD FOR THE PREPARATION OF ACETIC ACID. [1962] 2p.
Order from ATS $3.75 ATS-59P59R

Trans. from #Byulleten' Izobretenii (USSR) 1961, no. 8 (Russian patent 137,513, filed 29 Aug 60 under no. 677,898/23).

DESCRIPTORS: *Acetic acids, Synthesis.

Schulze, G. E. R.
ON INTERMETALLIC COMPOUNDS. [1962] 6p.
Order from ATS $10.75 ATS-71P59G

Trans. of Forsch[ungen] u[nd] Fortschr[itte] (Germany) 1961, v. 35, no. 9, p. 262-264.

DESCRIPTORS: *Intermetallic compounds.

Shokin, P. F.
GRAVIMETRY. 5p. MTWL: 1084.
Order from OTS or ETC $1.40 62-26035

Trans. of table of contents of mono. Gravimetriya, Moscow, 1960 [315p.].

DESCRIPTORS: *Gravimetric analysis, Indexes.

Analytical Chemistry

Babko, A. K. and Lutokhina, N. V.
COLORIMETRISCHE BEPALING VAN MAGNESIUM IN GIETIJZER (Kolorimetricheskoe Opredelenie Magniya v Chugunakh) (Colorimetric Determination of Magnesium in Cast Iron). 9p. (foreign text included) 7 refs. (text in Dutch).
Order from OTS or ETC $1.55 62-26067

Trans. of Ukrainskiĭ Khimicheskiĭ Zhurnal (USSR) 1959, v. 25, no. 2, p. 226-229.

DESCRIPTORS: *Cast iron, *Magnesium, *Colorimetric analysis.

Kibisov, G. J.
SPECTROCHEMISCHE BEPALING VAN HALOGENEN EN ZWAVEL (Spectrochemical Determination of Halogens and Sulfur) tr. by G. J. M. Fritschy. 11p. 6 refs. MTWL: 369 (text in Dutch).
Order from OTS or ETC $1.55 61-32048

Trans. of Zhurnal Analiticheskoi Khimii (USSR) 1950, v. 5, p. 51-57.

DESCRIPTORS: *Metals, *Sulfur, *Halogens, Determination, Spectrographic analysis.

Shabarova, N. T., Tunyak, A. P., and Nektarova, M. B.
A STUDY OF ORGANIC ACIDS IN SUBSURFACE WATERS. [1962] 3p.
Order from ATS $4.25 ATS-23P60R

Trans. of #Geol[ogiya] Nefti i Gaza (USSR) 1961, v. 5, no. 11, p. 50-51.

DESCRIPTORS: *Hydrology, Water, Chemical analysis, *Organic acids, Acids.

Stackelberg, M. V. and Schmidt, Helmut.
NEW DIRECTIONS IN POLAROGRAPHY. [1960] [20]p. (3 figs. omitted) 23 refs. [NLL] M. 1748.
Order from OTS or SLA $1.60 60-19908

Trans. of Angewandte Chemie (West Germany) 1959, v. 71, no. 15/16, p. 508

DESCRIPTORS: *Polarographic analysis, Theory, Oscillographs, Voltage, Electrodes.

Trillat, J. -J., Cuzin, J. and others.
STUDY OF TOBACCO SMOKE BY ELECTRON MICROSCOPE AND ELECTRONIC DIFFRACTION, tr. by P. Hajdu. 19 June 59, 13p. (13 figs. omitted) 7 refs.
Order from OTS and SLA $1.60 59-18111

Trans. of Bulletin de Microscopie Appliquée (France) 1958, ser. 2, v. 8, no. 3, p. 64-70.

DESCRIPTORS: *Tobacco, *Cigarettes, *Smokes, Microanalysis, Electron microscopes, Electron diffraction analysis.

The presence in the smoke of components with long hydrocarbon chains (paraffins) was shown irrefutably by electronic diffraction. The effect of filtration of these substances by the tobacco itself was confirmed

Andreev, V. V.
ON THE PRODUCTION OF AMMONIUM METAVANADATE FROM SODIUM VANADATES [1959] 8p. 6 refs. MDF A-140.
Order from OTS $0.50 62-11347

Trans. of #Zh[urnal] Neorg[anicheskoi] Khim[ii] (USSR) 1959, v. 4, no. 10, p. 2384-2389.

DESCRIPTORS: *Ammonium radicals, *Sodium compounds, *Vanadates, Synthesis, Chemical reactions, Chlorides.

In producing ammonium metavanadate by the introduction of ammonium chloride in an aqueous solution of sodium vanadates, the precipitate being formed can contain not only ammonium chloride and sodium chloride as impurities but also sodium metavanadate and vanadic acid and polyvanadates. An investigation of the combined solubility of the appropriate salts permitted conditions to be found which would guarantee the production of pure ammonium metavanadate from sodium vanadates without losses. (Author)

Cherbuliez, E. and Weniger, H.
PHOSPHORYLATION WITH POLYPHOSPHORIC ACIDS. 1962, 21p. 8 refs.
Order from SLA $2.60 62-14299

Trans. of Helvetica Chimica Acta (Switzerland) 1946, v. 29, p. 2006-2017.

DESCRIPTORS: *Phosphorylation, *Phosphoric acids, Acids, Barium compounds, Calcium compounds, Phosphates, Ethyl radicals, Alcohols, Cholines, Amines.

Morozov, I. S. and Korshunov, B. G.
INVESTIGATION OF THE CHLORINATION OF NIOBIUM PENTOXIDE AND ZIRCONIUM DIOXIDE. [1961] 17p. 10 refs.
Order from OTS or SLA $1.60 AEC-tr-4868

Trans. of [Khimiya Redkikh Elementov] (USSR) 1955, no. 2, p. 102-114.

DESCRIPTORS: *Niobium compounds, *Oxides, *Zirconium compounds, Dioxides, *Chlorination, Thermodynamics.

The chlorination reaction of niobium pentoxide was investigated from 700-1100°C. The vapor pressure of niobium oxychloride and its stability were determined. The equilibrium constant of the reaction $2Nb_2O_5 + 6Cl_2 \rightleftarrows 4NbOCl_3 + 3O_2$ and the change in the standard free energy were determined at 800, 900, 1000, and 1100°C. The chlorination reaction of ZrO_2 was determined from 1000-1200°. The equilibrium constant of the reaction $ZrO_2 + 2Cl_2 \rightleftarrows ZrCl_4 + O_2$ and the change in the standard free energy at 1000, 1100, and 1200° were determined. (Author)

Natta, G[iulio] Ercoli, R[affaele] and others.
PROPERTIES AND STRUCTURE OF A NEW METAL CARBONYL: VANADIUM HEXACARBONYL. [1962] 7p. 11 refs.
Order from CTS (Chem) $8.00 CTS(Chem)-262
subsequent copies $1.30/ea.

Trans. of [Accademia Nazionale dei] Lincei. [Classe di] Sc[ienze] Fis[iche] Mat[ematiche] e Nat[urali]. Rend[iconti] (Italy) 1959, ser. 8, v. 27, p. 107-112.

DESCRIPTORS: *Metallic compounds, *Vanadium compounds, *Carbonyl radicals, Physical properties, Chemical properties, Molecular structure, Molecular weight.

Pischinger, Ernest and Tomaszewski, Jerzy.
SODIUM SESQUICARBONATE. II. THE SYSTEM Na_2CO_3--$NaHCO_3$--H_2O (Seskwiweglan Sodowy. II. Uklad Na_2CO_3--$NaHCO_3$--H_2O). [1961] 16p. (4 figs. 3 tables omitted) 10 refs.
Order from SLA $1.60 62-14090

Trans. of Przemysl Chemiczny (Poland) 1958, v. [14] (37) p. 411-415.
Another trans. is available from ATS $12.75 as ATS-86L29P [1959] 9p.

DESCRIPTORS: *Sodium compounds, *Carbonates, Chemical equilibrium, Thermodynamics, Physical properties, Stability.

On the basis of our own investigations and that of others, the equilibrium polytherm of the system Na_2CO_3--$NaHCO_3$--H_2O was plotted, expressing the concentrations of the solutions first in weight peroentages and then in mval/20ccc. Study of this system confirmed the presence of unstable sodium bicarbonate (β-$NaHCO_3$) which had been discovered by Wegscheider and his coworkers. (Author) (See also 62-14089)

Rathje, W.
PREPARATION OF HYDROXYFLUORAPATITE (SCHLEEDITE) tr. by Bertha P. Klanova. 10 Jan 58, 1p. 1 ref. TVA 3682.
Order from OTS or SLA $1.10 60-19174

Trans. of Angew[andte] Chem[ie] (West Germany) 1957, v. 69, p. 717.

DESCRIPTORS: *Apatite, *Fluorides, *Hydroxides, Synthesis.

Toropov, N. A.
IMPORTANT OBJECTIVES OF SILICATE CHEMISTRY. 8 Feb 62, 3p. AID rept. 62-22.
Order from OTS or SLA $1.10 62-23700

Abstract trans. of Akademiya Nauk SSSR. Vestnik, 1961 [v. 31] no. 11, p. 40-46.

DESCRIPTORS: *Silicates, Glass, Refractory materials, Polymers, Chemical industry, Materials.

Tsirel'nikov, V. I., Komissarova, L. N., and Spitsyn, V. I.
CONDUCTIVITE THERMIQUE ET VISCOSITE DES VAPEURS DES TETRACHLORURES DE ZIRCONIUM ET d'HAFNIUM DANS l'INTERVALLE DE TEMPERATURE 300-700° (Thermal Conductivity and Viscosity of Zirconium Tetrachloride and Hafnium Tetrachloride Vapours in the 300-700° Range). 10p. (foreign text included). 5 refs. F/R-2567. (text in French).
Order from OTS or ETC $1.55 62-28002

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 139, no. 6, p. 1389-1391.
Another trans. is available in English from ATS $6.75 as ATS-34P60R [1962] 4p.

DESCRIPTORS: *Zirconium compounds, *Hafnium compounds, *Chlorides, Vapors, *Viscosity, *Thermal conductivity, Determination.

Organic Chemistry

IMPROVEMENTS IN THE ISOMERIZATION OF HYDROCARBONS. [1962] 6p.
Order from ATS $8.50 ATS-88P59F

Trans. of Belgian patent 604,445, by the British Petroleum Co., Ltd. [1961 or 1962 (?)].

DESCRIPTORS: *Hydrocarbons, *Isomeric transitions.

IMPROVEMENTS IN THE ISOMERIZATION OF HYDROCARBONS. [1962] 6p.
Order from ATS $10.35 ATS-89P59F

Trans. of Belgian patent 604,448, by the British Petroleum Co., Ltd. [1961 or 1962 (?)].

DESCRIPTORS: *Hydrocarbons, *Isomeric transitions.

Alekseeva, K. A., Dragunskaya, V. S. and others
DIE LÖSLICHKEIT DES SYNTHESEGASES IN EINIGEN KOHLENWASSERSTOFFEN UND SAUERSTOFFHALTIGEN PRODUKTEN UNTER DEN REAKTIONSBEDINGUNGEN DER OXO-SYNTHESE (Solubility of Synthetic Gases in Some Hydrocarbons and Oxygen-containing Products at Reaction Conditions of Oxosynthesis). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959, v. 4, no. 5, p. 24-28.
Other translations are available in English from ATS $7.60 as ATS-32N52R and from LC or SLA mi$1.80, ph$1.80 as 60-13647, DSIR LLU M.840 [1960] [9]p.

DESCRIPTORS: *Oxo process, *Solubility, *Hydrocarbons, *Oxygen compounds, Synthesis, Gases.

Andrianov, K. A., Bochkareva, G. P. and others.
POLYANHYDRIDES FROM PHTHALIC ACIDS AND MIXED PHTHALICADIPIC ACIDS. [1962] 5p.
Order from ATS $6.25 ATS-41P60R

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1960, v. 2, no. 5, p. 793-796.

DESCRIPTORS: *Anhydrides, Hydrides, Polymers, Synthesis, *Phthalic acids, acids, *Adipic acids, Chemical reactions.

Balandin, A. A., Klabunovskii, E. I., and Litvin, E. F.
COMPOSITION OF THE BUTENES FORMED IN THE CATALYTIC DEHYDRATION OF 2-BUTANOL. [1962] 9p.
Order from ATS $12.00 ATS-42P59R

Trans. of #Akad[emiya] Nauk SSSR. Otdel[enie] Khim[icheskikh] Nauk. Izvest[iya] 1961, no. 10, p. 1863-1870.

DESCRIPTORS: *Butanols, *Dehydration, Catalysts, Catalysis, *Butenes, Production, Chemical properties.

Berlin, A. A., Popova, G. L., and Isaeva, E. F.
DIE KONDENSIERENDE TELOMERISIERUNG UND NEUARTIGE NIEDERMOLEKULARE POLYESTER (POLYESTER-ACRYLATE) (Condensation Telemerization and a New Type of Unsaturated Polyesters (Polyester Acrylates). 4p. (text in German).
Order from T.I.B. $1.40

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 123, p. 282-284.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 60-10063 [1959] 6p.

DESCRIPTORS: *Polymerization, *Esters, Condensation reactions, *Acrylic resins.

Bucci, G. and Simonazzi, T.
DETERMINATION OF THE COMPOSITION OF ETHYLENE-PROPYLENE COPOLYMER BY MEANS OF SPECTROSCOPY IN THE NEAR INFRARED. May 62, 375 words, 4 refs.
Order from CTS (Chem) $1.50 CTS(Chem)-281
subsequent copies $0.25/ea.

Trans. of [la] Chimica e [l'] Industria (Italy) 1962, v. 44, p. 262.

DESCRIPTORS: *Polymers, *Ethylenes, *Propenes, Copolymerization, Spectrographic analysis, *Infrared spectroscopy, Spectroscopy.

Bykov, A. N.
SYNTHESIS AND INVESTIGATION OF SOME COLORED POLYAMIDES. [1962] 4p.
Order from ATS $7.10 ATS-13P59R

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1961, v. 3, no. 9, p. 1307-1310.

DESCRIPTORS: *Amides, Polymers, Synthesis, Colors

Charles, Rosita.
CHLORINATION OF PARAFFINS (Clororarea Parafinei). [1961] 5p. 3 refs.
Order from SLA $1.10 62-10673

Trans. of Revista de Chimie (Rumania) 1957 [v. 8] no. 1, p. 52-54.

DESCRIPTORS: *Synthetic waxes, Chlorination, Production.

The chlorination of paraffins with gaseous chlorine as generally practiced is discussed; then a method of chlorinating paraffins with gaseous chlorine containing various percentages of air and other gases is presented.

Chini, P.
ON THE SYNTHESIS OF DICOBALT OCTACARBONYL. I. STUDY OF THE SYNTHESIS OF DICOBALT OCTACARBONYL IN HOMOGENEOUS PHASE IN HYDROCARBON SOLVENTS. 14p. 20 refs. MTWL: 1111.
Order from OTS or ETC $1.85 62-26057

Trans. of Chimica e l'Industria (Italy) 1960, v. 42, no. 2, p. 133-137.
Another trans. is available from CTS (Chem) $10.50 as CTS (Chem)-115, 1960

DESCRIPTORS: *Cobalt compounds, Organic compounds, *Carbonyl radicals, Synthesis, Organic solvents, Hydrocarbons.

Chini, P.
ON THE SYNTHESIS OF DICOBALT OCTACARBONYL. II. STUDY OF THE SYNTHESIS OF DICOBALT OCTACARBONYL, IN HOMOGENEOUS PHASE, IN BASIC SOLVENTS IN THE LEWIS SENSE. SYNTHESIS IN HETEROGENEOUS PHASE. 18p. 11 refs. MTWL: 1112.
Order from OTS or ETC $1.85 62-26058

Trans. of Chimica e l'Industria (Italy) 1960, v. 42, no. 2, p. 137-142.
Another trans. is available from CTS (Chem) $12.00 as CTS (Chem)-118, 1960.

DESCRIPTORS: *Cobalt compounds, Organic compounds, *Carbonyl radicals, Synthesis, Organic solvents.

Danusso, Ferdinand and Polizzotti, Giulio.
ON THE APPLICATION OF DIFFERENTIAL THERMAL ANALYSIS TO MACROMOLECULAR MATERIALS: ISOTACTIC POLYSTYRENE, AND POLYETHYLENE. Mar 62, 3600 words, 10 refs.
Order from CTS (Chem) $14.40 CTS(Chem)-280
subsequent copies $2.40/ea.

Trans. of [Ia] Chimica e [l']Industria (Italy) 1962, v. 44, no. 3, p. 241-246.

DESCRIPTORS: *Polymers, *Ethylenes, *Styrenes, *Calorimetry, Transformations, Crystallization, Relaxation time.

Eidus, Ya. T., Ershov, N. I., and Erokhina, V. R.
RECIPROCAL TRANSITIONS BETWEEN THE REACTIONS BY WHICH HYDROCARBONS ARE FORMED FROM MIXTURES OF ETHYLENE, HYDROGEN, AND CARBON MONOXIDE. Pt. 34 of Catalytic Hydrocondensation of Carbon Monoxide with Olefins, and Hydropolymerization of Olefins under the Influence of Carbon Monoxide and Hydrogen. [1962] 7p.
Order from ATS $9.85 ATS-44P59R

Trans. of #Akad[emiya] Nauk SSSR. Otdel[enie] Khim[icheskikh] Nauk. Izvest[iya] 1961, no. 10, p. 1874-1879.

DESCRIPTORS: *Hydrocarbons, Synthesis, *Ethylenes, *Hydrogen, *Carbon compounds, *Monoxides, Chemical reactions, Condensation reactions, Polymerization, Catalysts, Catalysis.

(See also ATS-43P59R)

Ershov, N. I., Eidus, Ya. T., and Erokhina, V. R.
THE FORMATION OF HIGHER HYDROCARBONS IN WHICH THE NUMBER OF CARBON ATOMS IS NOT A MULTIPLE OF THAT IN THE STARTING OLEFIN. Pt. 33 of Catalytic Hydrocondensation of Carbon Monoxide with Olefins, and Hydropolymerization of Olefins under the Influence of Carbon Monoxide and Hydrogen. [1962] 4p.
Order from ATS $7.90 ATS-43P59R

Trans. of #Akad[emiya] Nauk SSSR. Otdel[enie] Khim[icheskikh] Nauk. Izvest[iya] 1961, no. 10, p. 1871-1874.

DESCRIPTORS: *Hydrocarbons, Synthesis, *Ethylenes, *Hydrogen, Atoms, *Carbon compounds, *Monoxides, Chemical reactions, Condensation reactions, Polymerization, Catalysts, Catalysis.

Fusco, Raffaello and Bianchetti, Giuseppi.
RESEARCHES ON AS-NAPHTHOTRIAZINES. II. AMINONAPHTHOTRIAZINES (Ricerche sulle As-Naftotriazine. Aminonaftotriazine). Rept. no. 10 on Asymmetrical Triazines. Sulla Triazine Asimmetriche). 13 Mar 59, 11p. 4 refs.
Order from OTS or SLA $1.60 59-14707

Trans. of Gazzetta Chimica Italiana, 1957, v. 87, no. 4-42, p. 446-453.

DESCRIPTORS: *Triazenes, *Amines, *Naphthyl radicals, Synthesis, Quinones, Naphthalenes, Guanidines, Chemical reactions, Isomers.

The synthesis of c-amino-[1,2-e]-as-naphthotriazine, f. p. 200-201°C described by Thiele is reexamined and greatly improved. The aminonaphthotriazine obtained by De by the action of aminoguanidine on 1,2-naphthoquinone to a fusion point of 240°C had been ascribed, was reexamined and its identity with that of Thiele, f. p. 200°C, was demonstrated. Successive replacements of the NH_2 group of this compound by the groups OH, Cl, NH-NH_2, and H lead to the production of [1,2-e]-as-naphthotriazine. Also described, is the preparation of an aminonaphthotriazine isomer not

known in the literature (the c-amino-[2,1-e]-as-naphthotriazine) by Curtius degradation from an intermediate product described by us in the preceding article. (Author) (See also 59-14706)

Goerrig, Dieter, Jonas, Heinz, and Moschel, Wilhelm.
PROCESS FOR THE PREPARATION OF ORGANIC FLUORINE COMPOUNDS. [1962] 4p. 1 ref.
Order from OTS or SLA $1.10 62-10995

Trans. of German patent 1,040,009, by Farbenfabriken Bayer Aktiengesellshaft, appl. 8 Oct 52, issued 12 Mar 59.

DESCRIPTORS: *Fluorides, *Organic compounds, Electrolysis, Synthesis.

A process is proposed for the preparation of organic fluorine compounds by electrolysis of organic compounds in hydrogen fluoride, in which bromine or iodine containing halocarbon compounds, which consist of only carbon and halogen, are subjected to electrolysis in hydrogen fluoride. A temperature of -80 to + 50°C, preferably between 0 and + 20°C, is chosen. The process is preferably carried out at standard pressure and keeping at a potential above 3.2 volts, preferably between 5 and 8 volts.

Grinev, A. N., Shedov, V. I., and Terentev, A. P.
UNTERSUCHUNGEN AUF DEM GEBIET DER CHINONE 11. MITTEILUNG. SYNTHESE EINIGER SUBSTITUIER TER INDOLE (Quinones. XI. Synthesis of Some Substituted Indoles). 5p. 3 refs. (text in German).
Order from OTS or ETC $1.40 62-26000

Trans. of Zhurnal Obshchei Khimii (USSR) 1956, v. 26, p. 1452-1453.

DESCRIPTORS: *Indoles, *Substitution reactions, Synthesis.

Horner, L., Hockenberger, L., and Kirmse, W.
AZINE BISOXIDES AND NITRIMINES FROM DIAZOALKANE DERIVATIVES. [1962] 9p.
Order from ATS $10.45 ATS-86P59G

Trans. of Chem[ische] Ber[ichte] (West Germany) 1961, v. 94, p. 290-297.

DESCRIPTORS: *Oxides, *Pyridines, *Azo compounds, *Imines.

Ingelman, B.
ENKELE RESULTATEN VAN DE SUIKERONDERZOEKINGEN TE UPPSALA (Några Resultat av Sockerundersökningarna i Uppsala) (Some Results of Sugar Research at Uppsala). 14p. (foreign text included). (text in Dutch).
Order from OTS or ETC $1.85 62-26071

Trans. of Socker (Sweden) 1945, v. 1, no. 7, p. 179-186.

DESCRIPTORS: *Carbohydrates, *Crystallization, Solution, Colloids.

Kargin, V. A. and Andranoka, G. P.
OVER HET ONTSTAAN VAN MICROSCOPISCH GROVE STRUCTUREN IN KRISTALLIJN POLYPROPYLEEN (Large Microscopic Formations in Crystalline Polypropylene). 4p. 8 refs. (text in Dutch).
Order from OTS or ETC $1.40 62-26059

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 139, no. 4, p. 874-876.
Another trans. is available in English from ATS $5.50 as ATS-54P58R [1961] 4p.

DESCRIPTORS: *Propenes, *Polymers, Crystallization, Crystal structure, *Microstructure.

Kargin, V. A. and Gorina, I. I.
POLYMORFIE VAN KRISTALLIJN POLYPROPYLEEN (Polymorphism of Crystalline Polypropylene). 3p. 8 refs. MTWL: 1106 (text in Dutch).
Order from OTS or ETC $1.40 62-26053

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 139, no. 6, p. 1371.
Another trans. is available in English from ATS $3.00 as ATS-30N58R [1961] 3p.

DESCRIPTORS: *Propenes, *Polymers, *Polymorphism, Crystal structure, Crystallization.

Khromov-Borisov, N. V. and Zakharova, N. A.
ALKYLATED AROMATIC AMINES. IV. MAGNITUDE OF THE STERIC FACTOR IN QUATERNIZATION REACTIONS OF DIMETHYL- AND DIETHYLANILINE. [1962] 6p.
Order from ATS $8.00 ATS-92P60R

Trans. of #Zhur[nal] Obshchei Khim[ii] (USSR) 1961, v. 31, no. 7, p. 2270-2274.

DESCRIPTORS: *Amines, Xylidines, *Anilines, Ethyl radicals, Chemical reactions, Reaction kinetics, Probability, Methyl radicals.

Knunyants, I. L. and Fabrichnyĭ, B. P.
TRANSPOSITION DES OXIMES DES CETONES CYCLIQUES. TRANSPOSITION DE LA β -TETRALONE-OXIME (Rearrangement of Oximes of Cyclic Ketones. The Rearrangement of 3, 4-dihydro-2(1H)-naphthalenone Oxime). 8p. 5 refs. F/R-2571. (text in French)
Order from OTS or ETC $1.55 62-28004

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 68, no. 3, p. 523-526.

DESCRIPTORS: *Ketones, *Oximes, Polycyclic compounds, Transformations, Preparation, Chemical reactions.

Kudryashova, N. I. and Khromov-Borisov, N. V.
ALKYLATED AROMATIC AMINES. III. N,N-DIMETHYL-2-m-XYLIDINE. [1962] 9p.
Order from ATS $10.25 ATS-56P60R

Trans. of #Zhur[nal] Obshchei Khim[ii] (USSR) 1961, v. 31, no. 7, p. 2263-2270.

DESCRIPTORS: *Amines, *Xylidines, *Methyl radicals, Chemical reactions.

Kuntzel, A., Erdmann, H. and others.
STUDIES OF THE FORMATION OF SIMPLE, MASKED CHROMIUM COMPLEXES. VII. THE CONSTITUTION OF CHROMIUM COMPLEXES WITH THE RESIDUES OF THE DICARBOXYLIC ACIDS.
[1961] 13p. (4 tables 7 formulae refs. omitted).
Order from SLA $1.60 62-10532

Trans. of [das Leder] (West Germany) 1954, v. 5, no. 4 [p. 73-82].

DESCRIPTORS: *Carboxylic acids, Molecular structure, *Chromium, Sodium compounds, Solutions

A description is given of the masking behaviour of sodium salts of dicarboxylic acids (oxalic, malonic acid, succinic acid, maleic acid, fumaric acid, adipinic acid, phthalic- and sulfophthalic acid) to ward hexaquochromesalt solutions. (Author)

Makarov, I. A. and Nizyaev, V. M.
ERFAHRUNGEN BEIM ZUSAMMENLEGEN DER SYNTHESE DES METHANOLS MIT DEN DESTRUKTIVEN HYDRIERPROZESSEN (Experiences in Combining the Methanol Synthesis with the Process of a Destructive Hydrogenation). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958, v. 3, no. 1, p. 9-17.

DESCRIPTORS: *Synthesis, *Methanols, *Hydrogenation.

Marconi, W., Santostasi, M. L., and Malde, M. de.
MONO- AND DIOLEFIN POLYMERIZATIONS CATALYZED BY INDENYL DERIVATIVES OF TITANIUM IN COMBINATION WITH METAL ALKYLS.
May 62, 3900 words, 9 refs.
Order from CTS(Chem) $15.60 CTS(Chem)-279
subsequent copies $2.60/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 3, p. 235-240.

DESCRIPTORS: *Ethylenes, *Polymerization, *Catalysts, Titanium compounds, Halides, Metallic compounds, Alkyl radicals, Indenes, Grignard reagents, Reagents, Catalysis, Butadienes, Isoprene, Polymers.

Marconi, W., Mazzei, A. and others.
STEREOSPECIFIC POLYMERIZATION OF ISOPRENE WITH CALCIUM ZINC ALKYLS AND TITANIUM SALTS. May 62, 3500 words, 12 refs.
Order from CTS(Chem) $14.00 CTS(Chem)-270
subsequent copies $2.30/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 2, p. 121-126.

DESCRIPTORS: *Isoprene, Polymerization, Catalysts, Catalysis, Complex compounds, Calcium compounds, Zinc compounds, Alkyl radicals, Titanium compounds, Chlorides.

Marconi, W., Santostasi, M. L., and Malde, M. de.
SYNTHESIS OF BISINDENYL DERIVATIVES OF TITANIUM AND THEIR COMPLEXES WITH ALUMINUM ALKYLS. May 62, 4000 words, 24 refs.
Order from CTS(Chem) $16.00 CTS(Chem)-278
subsequent copies $2.70/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 3, p. 229-234.

DESCRIPTORS: *Metallic compounds, *Indene, *Titanium compounds, Chlorides, Bromides, Iodides, *Complex compounds, *Aluminum compounds, *Alkyl radicals, Synthesis, Chemical properties, Physical properties.

Mirčev, A., Frimlová, Z., and Friml, M.
DE INVLOED VAN DE TEMPERATUUR OP DE LAATSTE FAZE VAN HET KOELEN VAN NAPRODUCTKOOKSELS (Vliv Teploty na Posledni Fazi Vyzravání Zadinovych Cukrovin) (Effect of Temperature on the Last Phase of the Maturing of Low-grade Massecuites). 14p. (foreign text included) (text in Dutch).
Order from OTS or ETC $1.85 62-26072

Trans. of Listy Cukrovarnické (Czechoslovakia) 1958, v. 74, p. 81-84.

DESCRIPTORS: *Carbohydrates, *Crystallization, Cooling, Temperature, Solution.

Mlejnek, O.
COMPARISON BETWEEN THE SYNTHESIS OF ALKYD RESINS WITH AND WITHOUT SOLUTE tr. by K. J. Pekarek and A. Delwel. 9p. 13 refs.
MTWL: 1105.
Order from OTS or ETC $1.55 62-26052

Partial trans. of Chemické Zvesti (Czechoslovakia) 1957, v. 11, p. 358-368.

DESCRIPTORS: *Alkyd resins, *Synthesis, Organic solvents, Phtalic acids, Malic acid, Adipic acids.

Moraglio, Giovanni.
ON THE DETERMINATION OF THE MOLECULAR WEIGHT OF LINEAR POLY-1-BUTENE. May 62, 1000 words, 7 refs.
Order from CTS(Chem) $4.00 CTS(Chem)-275
subsequent copies $0.75/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 1, p. 32-33.

DESCRIPTORS: *Polymers, *Butenes, *Molecular weight, Determination.

Natta, G., Pasquon, I., and Dente, M.
CALCULATION OF MOLECULAR WEIGHT DISTRIBUTION IN SLOW POLYMERIZATIONS. I. AVERAGE DEGREES OF POLYMERIZATION FOR POLYMERS OBTAINED IN PROCESSES CHARACTERIZED BY TERMINATION THROUGH CHAIN TRANSFER WITH MONOMER. May 62, 5200 words, 10 refs.
Order from CTS(Chem) $20.80 CTS(Chem)-272
subsequent copies $3.50/ea.

Trans. of [la] Chimica e [1']Industria (Italy) 1962, v. 44, no. 1, p. 1-9.

DESCRIPTORS: *Polymers, Polymerization, *Molecular weight, Distribution, *Statistical functions, Numerical analysis, Differential equations.

Natta, G., Pasquon, I., and Dente, M.
CALCULATION OF MOLECULAR WEIGHT DISTRIBUTION IN SLOW POLYMERIZATIONS. II. DISTRIBUTION CURVES FOR POLYMERS OBTAINED IN PROCESSES CHARACTERIZED BY TERMINATION THROUGH CHAIN TRANSFER WITH MONOMER.
May 62, 3700 words, 6 refs.
Order from CTS (Chem) $14.80 CTS (Chem)-273
subsequent copies $2.50/ea.

Trans. of [la] Chimica e [1']Industria (Italy) 1962, v. 44, no. 1, p. 10-17.

DESCRIPTORS: *Polymers, *Polymerization, *Molecular weight, Distribution, *Statistical functions, Numerical analysis, Partial differential equations. (See also CTS(Chem)-272)

Natta, Giulio.
HIGH-PRESSURE SYNTHESES OF OXYGENATED ORGANIC COMPOUNDS WITH CARBON MONOXIDE.
May 62, 9600 words, 41 refs.
Order from CTS(Chem) $19.20 CTS(Chem)-271
subsequent copies $3.20/ea.

Trans. of [la] Chimica e [1']Industria (Italy) 1951, v. 33, no. 5, p. 272-282.

DESCRIPTORS: *Organic compounds, Synthesis, Pressure, *Carbon compounds, *Monoxides, Reagents.

Natta, G. [Pasguon, I., and Giachetti, E].
THE KINETICS OF THE STEREOSPECIFIC POLYMERIZATION OF PROPYLENE TO ISOTACTIC POLYMERS. [1961] 10p. (4 figs. 1 table, 14 refs. omitted).
Order from SLA $1.10 62-14036

Trans. of [Angewandte Chemie (West Germany) 1957, v. 69, no. 7, p. 213-219].
Other translations are available from SLA mi$2.40, ph$3.30 as 59-15929 [1959] 15p. and $1.60 as 61-20651 [1961] [16]p.

DESCRIPTORS: *Propenes, Polymerization, *Polymers, Stereochemistry, Titanium compounds, Chlorides, Aluminum, Ethyl radicals, Catalysts, Catalysis.

For abstract see Technical Translations 2: 482, 1959.

Natta, Giulio, Mazzanti, Giorgio and others.
LINEAR ISOTACTIC HIGH POLYMERS DERIVED FROM ALDEHYDES BEYOND ACETALDEHYDE. [1962] 8p. 13 refs.
Order from CTS(Chem) $8.00 CTS(Chem)-259
subsequent copies $1.30/ea.

Trans. of [Accademia Nazionale dei] Lincei. [Classe di] Sc[ienze] Fis[iche] Mat[ematiche] e Nat[urali]. Rend[iconti] (Italy) 1960, ser. 8, v. 28, no. 1, p. 18-26.

DESCRIPTORS: *Acetalaldehydes, *Aldehydes, *Polymers, Polymerization, X-ray spectrum, Lattices, Crystallization.

Natta, Giulio, Mazzanti, Giorgio and others.
A NEW CRYSTALLIZABLE ORGANOMETALLIC COMPLEX CONTAINING TITANIUM AND ALUMINUM AND ITS CATALYTIC PROPERTIES IN THE POLYMERIZATION OF OLEFINS. [1962] 5p. 5 refs.
Order from CTS(Chem) $4.40 CTS(Chem)-260
subsequent copies $0.75/ea.

Trans. of [Accademia Nazional dei] Lincei. [Classe d.] Sc[ienze] Fis[iche] Mat[ematiche] e Nat[urali]. Rend[iconti] (Italy) 1959, ser. 8, v. 26, Feb, p. 150-154.

DESCRIPTORS: Organic compounds, *Metalorganic compounds, *Complex compounds, Titanium, Aluminum, Catalysis, Ethylenes, Polymerization, Crystallization.

Natta, G., Mazzanti, G. and others.
POLYMERIZATIONS PROMOTED BY METAL AMIDES AND THEIR STEREOSPECIFICITY. 18p. 18 refs.
MTWL: 1109.
Order from OTS or ETC $1.85 62-26055

Trans. of Chimica e l'Industria (Italy) 1960, v. 42, no. 5, p. 457-462.
Another trans. is available from CTS(Chem) $14.80 as CTS(Chem)-133 [1960] 16p.

DESCRIPTORS: *Amides, *Metallic compounds, *Polymerization, Molecular structure, Stereochemistry, Catalysts.

Oda, D.
REACTIONS OF PYRIDILS AND RELATED COMPOUNDS WITH ALKALI. 14p. 7 refs.
Order from OTS or ETC $1.85 62-26045

Trans. of unindentified Japanese article, pub. 1960.

DESCRIPTORS: *Pyridine derivatives, *Chemical reactions, Potassium compounds, Hydrates.

Ota, N.
HET EFFECT VAN KATALYSATOREN IN DE REACTIES WAARBIJ GELIJKTIJDIG AZIJNZUUR EN AZIJNZUURANHYDRIDE GEVORMD WORDT DOOR EEN OXYDATIE IN DE VLOEIBARE PHASE VAN ACEETALDEHYDE (The Effect of Catalysts in the Reactions Producing Simultaneously Acetic Acid and Acetic Anhydride by Oxidation in the Liquid-phase of Acetaldehyde). 10p. 6 refs. MTWL: 1090 (text in Dutch).
Order from OTS or ETC $1.55 62-26047

Trans. of [Tokyo Kogyo Shikensho Hokoku] (Japan) 1961, v. 56, no. 3, p. 98-101.

DESCRIPTORS: *Acetaldehydes, *Oxidation, *Acetic acids, *Acetic anhydrides, Liquids, Catalysts, Cobalt catalysts.

Pegoraro, M.
FRACTIONATION OF POLYPROPYLENE ACCORDING TO MOLECULAR WEIGHT ONLY. May 62, 3300 words, 14 refs.
Order from CTS(Chem) $13.20 CTS(Chem)-274
subsequent copies $2.20/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 1, p. 18-23.

DESCRIPTORS: *Polymers, *Propenes, *Fractionation, *Molecular weight.

Pino, Piero, Mazznati, Giorgio and others.
ACTION OF TERTIARY AMINES ON THE COMPLEX $(C_5H_5)_2$-$TiClAl_2(C_2H_5)_2$. [1962] 6p. 5 refs.
Order from CTS(Chem) $4.80 CTS(Chem)-265
subsequent copies $1.10/ea.

Trans. of [Accademia Nazionale dei] Lincei. [Classe di] Sc[ienze] Fis[iche] Mat[ematiche] e Nat[uralli]. Rend[iconti] (Italy) 1959, ser, 8, v. 27, p. 392-396.

DESCRIPTORS: *Amines, *Complex compounds, Chemical reactions. Molecular weight.

Pritzkow, W. and Hofmann, R.
RESEARCH ON THE DECOMPOSITION OF CUMENE HYDROPEROXIDE BY ACID. [1962] 8p.
Order from ATS $10.60 ATS-74P59G

Trans. of J[ournal für] Prakt[ische] Chem[ie] (East Germany) 1961, ser. 4, v. 14, p. 131-138.

DESCRIPTORS: *Cumenes, *Hydroperoxides, Decomposition, Acids.

Putti, G. and Sabbioni, F.
SPHERULITIC STRUCTURES OF SOME ISOTACTIC POLYMERS. May 62, 3400 words (16 figs omitted) 11 refs.
Order from CTS (Chem) $10.20 CTS(Chem)-269
subsequent copies $1.70/ea.

Trans. of Materie Plastiche (Italy) 1959, v. 25, p. 729-736.

DESCRIPTORS: *Polymers, Butenes, Styrenes, Propenes, *Crystallization, Crystal structure, Growth, Temperature, Microstructure, Optics, Crystals.

Sokov, Yu. F. and Nikitina, L. G.
DIE WIRTSCHAFTLICHKEIT VON KATALYTISCHEN REFORMINGANLAGEN IN EINEM PLATIN-KATALYSATOR (On Economical Effectiveness of Catalytic Reforming Facilities with Platinic Catalysts) 7p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1961 [v. 6] no. 7, p. 31-34.

DESCRIPTORS: *Hydrocarbons, *Decomposition, Catalysts, Effectiveness, Platinum.

Starobinets, G. L. and Tikavyĭ, V. F.
TRENNUNG VON GEMISCHEN AUS AROMATISCHEN UND ALIPHATISCHEN KOHLENWASSERSTOFFEN MIT HILFE VON COPOLYMEREN AUS BUTADIEN ACRYLNITRIL (Separation of Mixtures of Aromatic and Aliphatic Hydrocarbons by Means of Butadiene-nitrile-copolymers). 2p. (text in German).
Order from T.I.B. $1.40

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1960 [v. 5] no. 9, p. 16-18.

DESCRIPTORS: *Hydrocarbons, Aliphatic compounds, *Copolymerisation, *Butadienes, *Nitriles, Separation

Topchiev, A. V., Tumerman, B. M., and Fedorova, T. A.
DIE ALKYLIERUNG VON PHENOL MIT DIISOBUTYLEN UND TRIISOBUTYLEN IN GEGENWART BORFLUORID-HALTIGER KATALYSATOREN (Alkylation of Phenol with Diisobutylene and Triisobutylene in the Presence of Catalysts Containing Boron Trifluoride). 2p. (text in German).
Order from T.I.B. $1.40

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 120 [no. 1] p. 90-93.
Another trans. is available in English from CB $12.50.

DESCRIPTORS: *Phenols, *Butenes, *Boron compounds Fluorides, Catalysts.

Troyanov, I. A., Shein, S. M., and Ignatov, V. A.
PREPARATION OF 2, 4, 5-TRICHLOROPHENOL BY THE HYDROLYSIS OF 1, 2, 4, 5-TETRACHLOROBENZENE IN METHYL ALCOHOL MEDIUM. [1962] 3p.
Order from ATS $5.00 ATS-79P59R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 3, p. 213-214.

DESCRIPTORS: *Chlorides, *Phenols, Synthesis, Benzenes, Hydrolysis, *Methanols.

Tsuchiya, T., Kaneko, R., and Endo, T.
THE CHEMICAL STRUCTURE OF PRISTANE. Pt. 1. 8p. 11 refs. MTWL: 1075.
Order from OTS or ETC $1.55 62-26026

Trans. of Kogyo Kagaku [Zasshi] (Japan) 1952, v. 55, no. 4, p. 249-251

DESCRIPTORS: Sharks, *Liver, *Oils, *Hydrocarbon, Chemical analysis.

Tsuchiya, T., and Kaneko, R.
UNSAPONIFIED MATTER IN SPERMWHALE LIVER FAT SUBSTANCE. Pt. 1. 7p. 2 refs. MTWL: 1076.
Order from OTS or ETC $1.55 62-26027
Trans. of Kogyo Kagaku [Zasshi] 1951, v. 54, no. 9, p. 592-594.
DESCRIPTORS: *Liver, *Fats, Cetacea, *Hydrocarbon, Chemical analysis.

Tsvetkov, V. N., Skazka, V. S., and Krivoruchko, N. [Ya].
RELATION BETWEEN THE MOLECULAR WEIGHT AND INTRINSIC VISCOSITY OF STEREOREGULAR POLYMETHYL METHACRYLATE FRACTIONS IN BENZENE. [1961] [6]p. 8 refs.
Order from OTS or SLA $1.10 62-13836

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1960, v. 2 [no. 7] p. 1045-1048.

DESCRIPTORS: *Benzenes, *Polymers, Methyl radicals, Methanes, Acrylic resins, Molecular weight, Viscosity, Stereochemistry.

A study was made of the scattering of light by various fractions of isotactic and syndiotactic PMMA in acetone and ethyl acetate, and the intrinsic viscosities of these fractions in benzene have been determined. It has been shown that the variation of the intrinsic viscosity of the benzene solutions with molecular weight is the same for all the stereoisomers over the range of molecular weights explored ($0.3.10^5$ - $4.5.10^5$). The results obtained lead to the conclusion that the stereoregularity of the PMMA chains has practically no effect upon their undisturbed dimensions. (Author)

Turova-Polyak, M. B. and Rudenko, N. V.
DIE ALKYLIERUNG VON BENZOL UND BENZOLDERIVATEN MIT ISOPROPYLALKOHOL ÜBER ALSILIKAT ALS KATALYSATOR BEI ATMOSPHÄRENDRUCK (Alkylation of Benzene and its Derivates by Isopropyl Alcohol over an Aluminosilicate Catalyst at Atmospheric Pressure). 2p. (text in German).
Order from T.I.B. $1.40

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 126, p. 1289.

DESCRIPTORS: *Benzenes, *Benzene derivatives, Alcohols, *Aluminum compounds, *Silicates, Catalysts, Propanols.

Zannetti, R., Manaresi, P., and Buzzoni, G. C.
CRYSTALLINITY AND POLYMORPHISM OF POLY-[ALPHA]-BUTENE. [1962] 11p.
Order from ATS $14.45 ATS-04P601

Trans. of [la] Chim[ica] e [l'] Ind[ustria] (Italy) 1961, v. 43, no. 7, p. [735]-740.
Other trans. are available from CTS (Chem) $16.00, subsequent copies $2.70/ea., as CTS(Chem)-235 [1961] 4000 words and from SLA $2.60 as 62-14311 [1962] [24]p.

DESCRIPTORS: *Butenes, Polymers, *Polymorphism, *Crystallization.

Physical Chemistry

RESEARCH ON CATALYSIS. 30 Sep 60 [8]p. JPRS: 6043.
Order from OTS or SLA $1.10 60-31819

Trans. of Mikrochimica Acta (Austria) 1937, v. 2, no. 1/2, p. 1 and 80-84.

DESCRIPTORS: *Catalysis, Catalysts, Microchemistry, *Gold, *Silver compounds, Reduction, Palladium, Chemical reactions.

Contents:
On the catalytic effect of gold in the reduction of silver salts, by P. Krumholz and H. Watzek

AsO_3.

Agafonov, A. V., Dubinin, M. M. and others.
STUDIES ON THE PREPARATION AND USE OF NEW SELECTIVE ADSORBENTS (MOLECULAR SIEVES) IN THE USSR. [1962] 9p.
Order from ATS $17.45 ATS-36P59R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 7, p. 26-30.
Other translations are available from OTS or SLA $3.60 as 62-19682, JPRS-11353, 11 Dec 61 [39]p. and from HMSO $0.77, in NLL Translations Bulletin, 1962, v. 4, no. 1.

DESCRIPTORS: *Adsorbents, *Particulate filters.

Al'tshuler, M. A.
THE THEORY OF CAPILLARY IMPREGNATION OF POROUS MATERIALS WITH DEAD-END CAPILLARIES BY WETTING LIQUIDS. [1962] 7p.
Order from ATS $9.40 ATS-87P59R

Trans. of #Kolloid[nyi] Zhur[nal] (USSR) 1961, v. 23, no. 6, p. 646-651.

DESCRIPTORS: *Porous materials, *Wetting agents, *Impregnation, Liquids

Antonovskii, V. L. and Makalets, B. I.
SEQUENCE OF THE FORMATION OF PRODUCTS IN LIQUID-PHASE OXIDATION OF CUMENE. [1962] 4p.
Order from ATS $5.00 ATS-75P59R

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1961, v. 140, no. 5, p. 1070-1072.

DESCRIPTORS: *Cumenes, Liquids, *Oxidation.

Arnold, K. and Vetter, K. J.
THE FLADE POTENTIAL OF PASSIVE NICKEL. [1962] 12p.
Order from ATS $16.45 ATS-02P60G

Trans. of Z[eitschrift für] Elektrochem[ie] (West Germany) 1960, v. 64, no. 3, p. 407-413.

DESCRIPTORS: *Nickel, *Passivity, *Electric potential.

Becke-Goehring, Margot and Sambeth, Jörg.
PHOSPHORUS-NITROGEN COMPOUNDS. VIII. REACTION BETWEEN PHOSPHORUS PENTOXIDE AND AMMONIA, tr. by Bertha P. Klenova. 9 Sep 59, 9p. 18 refs. [No.] 3824.
Order from OTS or SLA $1.10 60-19159

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (East Germany) 1958, v. 297, p. 287-295.

DESCRIPTORS: *Phosphorus compounds, *Nitrogen compounds, *Oxides, *Ammonia, Chemical reactions.

Ammonolysis of the P_4O_{10} molecule yields mainly derivatives of diphosphoric acid. By heating these reaction products to a temperature of about 100°C an ammonium polyphosphate is formed in which one half of the phsophorus atoms is linked by oxygen atoms, one half by NH-groups. (Author)

Dolgoplosk, B. A., Romanov, L. M. and others.
CATALYSTS BASED ON ALKYLMAGNESIUM HALIDES AND TITANIUM TETRACHLORIDE FOR THE SYNTHESIS OF AMORPHOUS AND CRYSTALLINE POLYMERS FROM α-OLEFINS AND DIENES [Katalizatory na Osnove Magniigalogenalkilov i Chetyrekh-Khloristogo Titana dlya Sinteza Amorfnykh i Kristallicheskikh Polimerov iz α-Olefinov i Dienov]. [1962] 3p.
Order from ATS $6.00 ATS-63P60R

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1957, v. 115, no. 4, p. 731-733.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-22235, CTS-448, Apr 58 [5]p.

DESCRIPTORS: *Catalysts, *Polymers, Synthesis, Ethylenes, Polymerization, Alkyl radicals, *Magnesium compounds, Halides, *Titanium compounds, Chlorides.

Fomin, V. V.
CHEMISTRY OF EXTRACTION PROCESSES, tr. by A. S. Kertes. 1962, 145p. 236 refs. PL-480 Comm.
Order from OTS $1.50 61-31210

Trans. of mono. Khimiya Ekstraktsionnykh Protsessov, Moscow, 1960.

DESCRIPTORS: *Physical chemistry, Chemistry, *Solvent extraction, Organic solvents, Solvates, Solubility, Chemical equilibrium, Hydrogen ion concentration, Ions, Dissociation, Water, Temperature, Inorganic substances, Chemical reactions, Reaction kinetics.

In this review an attempt is made to summarize the existing concepts on the mechanisms of extraction, the dependences of the distribution coefficient on the conditions of extraction, the methods employed to achieve this aim and finally to note the contradictions and where possible to resolve them. Methods that are widely applied, such as the investigation of the dependence of the distribution coefficient on the concentration of the extractant for the determination of the solvation number are only reported comparatively in brief. Lengthier consideration is given to the problem of deviations from general regularities occurring at higher solute concentrations and other cases. For the sake of a simplified treatment, some of the more complex mathematics is transferred to the Appendix. (Author)

Furman, M. S., Shestakova, A. D., and others
DIE OXYDATION VON n-BUTAN IN ESSIGSAURER LÖSUNG (The Oxidation of n-Butane in Acetic Acid Solution with Air under Pressure). 4p. (text in German).
Order from T.I.B. $1.40

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 124, p. 1083-1084.
Another trans. is available in English from ATS $5.00 as ATS-44L37R [1959] 3p.

DESCRIPTORS: *Butanes, *Acetic acids, *Oxidation, Pressure, Air.

Gel'fman, M. Sh.
DE INVLOED VAN DE TEMPERATUUR EN DE GASCONCENTRATIE OP DE ABSORPTIE VAN SO_3 DOOR MENGZUREN (The Effect of Temperature and Concentration of Gas on the Absorption of Sulfur Trioxide by Sulfuric Nitric Acid Mixtures) tr. by G. J. M. Fritschy. 10p. 4 refs. MTWL: 370 (text in Dutch).
Order from OTS or ETC $1.55 61-32049

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1950, v. 23, p. 1018-1022.

DESCRIPTORS: Sulfuric acid, *Sulfur compounds, *Oxides, Nitric acid, Absorption, Temperature.

Grassman, P.
A REVIEW OF LOW TEMPERATURE TECHNIQUE, tr. by Germann. 19 Jan 59 [14]p. (7 figs. omitted) 108 refs.
Order from OTS or SLA $1.60 59-16997

Trans. of unidentified article from Kältetechnik (West Germany) [1958?].

DESCRIPTORS: *Low temperature research, *Liquified gases, Superconductivity, Chemical industry.

Hashimoto, S. and Nagai, K.
THE PRODUCTS OF HYDROLYSIS OF 1, 2, 4-TRICHLOROBENZENE. [1962] 5p.
Order from ATS $7.45 ATS-47P60J

Trans. of Doshisha Kogaku Kaishi (Japan) 1957, v. 8, no. 2, p. 76-79.

DESCRIPTORS: *Benzenes, *Chlorides, *Hydrolysis.

Khrisanfova, A. I., Soboleva, G. N., and Semendeev, B. V.
DIE THERMOGRAPHISCHE ANALYSE AUF KOHLEN-UNTERSUCHUNGEN IN DER OXYDATIONSZONE (Thermographic Analysis at Carbon Tests in the Oxidation Zone). 10p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1960 [v. 5] no. 4, p. 33-39.

DESCRIPTORS: *Carbon, *Thermochemistry, *Oxidation, *Volumetric analysis, Pyrolysis, Physical properties.

Koepp, H.-M., Wendt, H., and Strehlow, H.
THE COMPARISON OF ELECTROMOTIVE SERIES IN DIFFERENT SOLVENTS, PT. 2. [1962] 13p.
Order from ATS $16.75 ATS-27P60G

Trans. of Z[eitschrift f\ir] Elektrochem[ie] (West Germany) 1960, v. 64, no. 4, p. 483-491.

DESCRIPTORS: *Organic solvents, Electrochemistry, Electrodes, Electric potential.

Lindberg, J. J.
DIMETHYLSULFOXIDE, STRUCTURE AND PHYSICOCHEMICAL PROPERTIES. [1962] 6p.
Order from ATS $11.35 ATS-17P60S

Trans. of Finska Kemistsamfundets Medd[elanden] 1961, v. 70, no. 1, p. 33-39.

DESCRIPTORS: *Sulfoxides, *Methyl radicals, Molecular structure, Physical properties, Chemical properties.

Manyasek, Z.
THE FORMATION AND DECOMPOSITION OF HYDROPEROXIDES OF ATACTIC POLYPROPYLENE. 10p. 5 refs. MTWL: 1103.
Order from OTS or ETC $1.55 62-26041

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1961, v. 3, no. 7, p. 1104-1108.

DESCRIPTORS: *Propenes, Polymers, Oxidation, *Peroxides.

Nisel'son, L. A.
DENSITIES OF $ZrCl_4$ AND $HfCl_4$ IN THE VAPOR AND LIQUID STATES. [1962] 3p.
Order from ATS $4.50 ATS-36P60R

Trans. of #Zhur[nal] Neorg[anicheskoi] Khim[ii] (USSR) 1961, v. 6 [no. 5] p. 1242-1244.

DESCRIPTORS: *Zirconium compounds, *Hafnium compounds, *Chlorides, Vapors, Liquids.

Palatnik, L. S. and Kopeliovich, I. M.
TOPOANALYTICAL INVESTIGATION OF EQUILIBRIUM DIAGRAMS OF MULTICOMPONENT EUTECTIC SYSTEMS, PT. 1. [1962] 12p.
Order from ATS $14.95 ATS-20P60R

Trans. of Zhur[nal] Fiz[icheskoi] Khim[ii] (USSR) 1956, v. 30, no. 9, p. 1948-1958.
Another trans. is available from LC or SLA mi$2.70, ph$4.80 in 60-17712, TVA-3710, 12 Apr 58 [22]p.

DESCRIPTORS: *Eutectics, Phase studies, Chemical equilibrium, Mathematical analysis, Topology.

For abstract see Technical Translations 4: 145, 1960.

Petrov, G.N. and Korotkov, A. A.
COMPOSITION OF PRODUCTS OF THE REACTION BETWEEN VANADIUM OXYTRICHLORIDE AND TRIETHYLALUMINIUM. 9p. 10 refs. MTWL: 1102.
Order from OTS or ETC $1.55 62-26051

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 141, no. 3, p. 632-635.

DESCRIPTORS: *Aluminum compounds, *Organic compounds, *Vanadium compounds, Oxychlorides, Chemical reactions.

Petrov, K. A., Neimysheva, A. A. and others.
REACTION OF THE N-CHLOROIMIDES OF CARBOXYLIC ACIDS WITH TRIALKYL, HALO-, AND CYANOPHOSPHITES. May 62, 2000 words.
Order from LSA $20.00

Trans. of #Zhurnal Obshchei Khimii (USSR) 1961, v. 31, p. 516-522.

DESCRIPTORS: *Carboxylic acids, Acids, *Imides, *Chlorides, *Phosphites, Alkyl radicals, Cyano radicals, Halides, Chemical reactions.

Ryshavy, D.
OXIDATION OF ISOTACTIC POLYPROPYLENE. 9p. 5 refs. MTWL: 1104.
Order from OTS or ETC $1.55 62-26042

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1961, v. 3, no. 7, p. 1110-1115.
Another trans. is available from OTS or SLA $1.60 as 62-14283 [1961] [12]p.

DESCRIPTORS: *Propenes, *Polymers, *Oxidation, Chemical analysis.

Safronova, T. P. and Zhuze, T. P.
UNTERSUCHUNG DER LÖSLICHKEIT VON GASEN IN ERDÖLEN BEI ERHÖTEN DRÜCKEN UND TEMPERATUREN (Solubility of Gases in Mineral Oils at Increased Pressures and Temperatures), 11p. (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958 [v. 3] no. 2, p. 41-46.
Other translations are available in English from LC or SLA mi$1.80, ph$1.80 as 60-18189 [1960] 10p. and mi$2.40, ph$3.30 as 61-10489 [1961] [15]p.

DESCRIPTORS: *Solubility, *Gases, *Mineral oils, Pressure, Temperature.

Scacciati, G.
ELECTROLYTIC DEPOSITION OF MANGANESE. [1962] 16p. (2 figs refs. omitted).
Order from SLA $1.60 61-18832

Trans. of la Metallurgiya Italiana, 1960, [v. 52] no. 8, p. 551-560.

DESCRIPTORS: *Manganese, Electrodeposition, Electrolytic cells, Electrochemistry, Production.

The results of over one year's work in a pilot plant of about 100 kg per day capacity are described. The diaphragm cell used in this plant is illustrated and compared with [that of] other analogous plants. Data are presented concerning heat reduction of the mineral, extraction, and electrolytic purification. The article begins with a brief chronology of the development of this new metallurgy and ends with a report of data for the energy consumption for the electrolytic extraction of manganese and the characteristics of the metal produced. (Author)

Vinner, G. G., Ravikovich, A. M., and Tlyustangelova, M. V.
EINFLUSS VON BASISCHEN DETERGENTS AUF DIE HOCHTEMPERATUR-OXYDATION VON MINERALÖLEN (Influence of Alkali Detergents upon High-temperature Oxidation of Mineral Oils). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959 [v. 4] no. 6, p. 31-38.

DESCRIPTORS: *Detergents, *Oxidation, *Mineral oils, High temperature research.

Vlasenko, V. M., Rusov, M. T., and Yuzefovich, G. E.
KINETICS OF HYDROGENATION OF CARBON DIOXIDE ON A NICKEL CONTACT CATALYST. [1962] 5p.
Order from ATS $8.00 ATS-64P59R

Trans. of Kinetika i Kataliz (USSR) 1961, v. 2, no. 4, p. 525-528.

DESCRIPTORS: *Nickel catalysts, *Carbon dioxide, *Hydrogenation, Reaction kinetics.

EARTH SCIENCES

ARCTIC EXPEDITIONS AND DRIFTING STATIONS, 1956-58, tr. by Valys Zilius. [1961] [20]p. AmMetSoc T-RC-18+; AmMetSoc T-R-(268) (271) (274) (276) (278); AD-246 660.
Order from OTS or SLA $1.60 61-13977

Trans. of Problemy Arktiki (USSR) 1959, no. 6, p. 121-137.

DESCRIPTORS: *Arctic regions, Exploration, Navigation, Icebreakers, Oceanographic vessels, *Oceanography, Ice, Aerial reconnaissance, Greenland Sea, *Scientific research, Drift.

Contents:
The drift of the icebreaker Admiral Makarov convoy in Proliv Longa in 1956 (O dreife Karavana l/k "Admiral Makarov" v prolive Longa v 1956 g.) by B. P. Khimich
The oceanographic expedition to the Greenland Sea on the diesel-electric ship Lena in 1958 (Okeanograficheskaya ekspeditsiya v Grenlandskoe more na dizel'-elektrokhode "Lena" v 1958 g.) by V. A. Shamont'ev
The drift of station North Pole-6 (Dreif stantsii "Severnyi Polius-6") by V. M. Dryatskii
The drift of station North Pole-7 (Dreif stantsii "Severnyi Polius-7") by V. A. Vedernikov
The 1958 high-latitude aerial expedition (Vysokoshirotnaya vozdushnaya ekspeditsiya 1958 g.) by M. M. Nikitin
An expedition for setting out Alekseev beacons in spring 1958 (Ekspeditsiya po rasstanovke radiomayakov "Vekha Alekseeva" vesnoi 1958 g.) by Kh. G. Bunyak.

Laszloffy, Woldemar and Szesztay, Karoly.
A SURVEY OF HYDROLOGY IN THE SOVIET UNION. 19 Jan 61 [72]p. JPRS: 6603.
Order from OTS or SLA $7.60 62-19377

Trans. of Vizugyi Kozlemenyek (Hungary) 1960, no. 3, p. 360-397.

DESCRIPTORS: *Hydrology, Meteorology, USSR.

Mukai, S., Kano, G., and others.
ABOUT THE ADSORPTION OF SURFACE ACTIVATOR AND THE CHANGE OF SURFACE ELECTRO KINETIC POTENTIAL OF MINERAL PARTICLES. 12p. 8 refs.
Order from OTS or ETC $1.85 62-26046

Trans. of Nippon Kogyo Kaishi (Japan) 1959, v. 75, p. 167-172.

DESCRIPTORS: *Minerals, Particles, *Flotation, Adsorption, Electrochemistry, *Thermodynamics, Surfaces.

Climatology and Meteorology

METEOROLOGICAL INFORMATION ON BULGARIA. 2 May 61 [26]p. JPRS: 8151.
Order from OTS or SLA $2.60 62-19413

Trans. of Khidrologiya i Meteorologiya (Bulgaria) 1960, no. 5, p. 28-36 and 51-60.

DESCRIPTORS: Meteorology, *Meteorological data, *Bulgaria, Inland waterways, Temperature.

Contents:
Temperature conditions in the rivers of the Bulgarian People's Republic, by Al. I. Petrov
Cold fronts on the western quadrant and conditions producing frontogenesis or frontolysis over the Balkan Peninsula, by M. Martinov.

THE USE OF RADAR IN AEROLOGY. 23 Mar 62 [16]p. 14 refs. JPRS: 13095.
Order from OTS or SLA $1.60 62-23597

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 140, no. 3, p. 575-578 and 591-594.
Other translations are available separately from ATS $8.25 as ATS-49N57R [1961] 4p. and $7.65 as ATS-51N57R [1961] 5p.

DESCRIPTORS: *Clouds, *Precipitation, Radio waves, Polarization, Radar analysis.

Contents:
On the use of radar for the study of the structure of clouds, by A. M. Borovikov and others
The use of elliptically-polarized radio waves for the investigation of clouds and precipitation, by A. B. Shupyatskii and S. P. Morgunov.

Aujeszky, Laszlo.
MEDIUM-RANGE WEATHER FORECASTING IN THE HUNGARIAN METEOROLOGICAL SERVICE (Kozeptartamu Prognozisok a Magyar Meteorologiai Szolgalatban). 21 Apr 61 [5]p. JPRS: 9061.
Order from OTS or SLA $1.10 62-19394

Trans. of Idojaras (Hungary) 1960 [v. 64] no. 3, p. 182-184.

DESCRIPTORS: *Weather forecasting, *Meteorology, *Hungary.

Bell, B.
INFORMATION ON THE CENTRAL INSTITUTE OF METEOROLOGY OF HUNGARY. 28 Nov 61 [10]p. JPRS: 11416.
Order from OTS or SLA $1.10 62-19537

Partial trans. of Idojaras (Hungary) 1960, v. 64, no. 5, p. 264-268.

DESCRIPTORS: *Meteorology, *Weather forecasting, Scientific research, *Hungary.

Berlyand, M. E.
CONDITIONS OF FOG FORMATION (Ob Uslovii Obrazovaniya Tumanov) tr. by Robert Sholiton. Oct 61 [8]p. 7 refs. AmMetSoc T-R-382+.
Order from OTS or SLA $1.10 62-24807

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1960, no. 94[156] p. 145-148.

DESCRIPTORS: *Fog, Temperature, Air, Dew point.

The process of formation of a radiation fog is investigated and the conditions for the onset of a fog depending on the relationship between the temperature of the air and the value of the dew point are specified.

Dergach, A. L.
THE EFFECT OF RADIATION FOG ON THE DEVELOPMENT OF TEMPERATURE INVERSION (O Vliyanii Radiatsionnogo Tumana na Razvitie Temperaturnoi Inversii) tr. by Robert Sholiton. Nov 61 [7]p. AmMetSoc T-R-379+.
Order from OTS or SLA $1.10 62-24806

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) [1960] no. 91[153] p. 56-59.

DESCRIPTORS: *Fog, Clouds, Arctic regions, *Thermal radiation, Dew point, *Temperature, Atmospheric sounding.

Certain experimental data obtained by the sounding of fogs in the Dickson Island region in 1956, are examined. On the basis of these data, the conclusion is drawn that radiation inversions in the surface layer of air are local in nature. A radiation fog exerts a direct influence on the evolution of an inversion. (Translator?)

Gracheva, V. P.
INVESTIGATION OF THE CHARACTERISTICS OF FOG FORMATION (Issledovanie Kharakteristiki Obrazovaniya Tumana) tr. by Robert Sholiton. Oct 61 [11]p. 3 refs. AmMetSoc T-R-383+.
Order from OTS or SLA $1.60 62-24805

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1960, no. 94[156] p. 149-155.

DESCRIPTORS: *Fog, Meteorological data, *Weather forecasting, Humidity, Dew point.

On the basis of processing observational data, there are determined a number of characteristics of fog (the value of the relative humidity during the formation of a fog, the connection between the time of onset of a fog and the time the air temperature reaches the value of the dew point, the time of minimum visibility in a fog, etc.). The analysis of the results and the conclusions drawn can be used to make fog forecasting more accurate. (Author)

Kasneci, P. and Jaho, S.
SOME CHARACTERISTICS OF ALBANIA'S TEMPERATURE AND PRECIPITATION. 14 Feb 62 [7]p. JPRS: 12512.
Order from OTS or SLA $1.10 62-19795

Trans. of abstract of Idojaras (Hungary) 1961, v. 65, no. 2, p. 90-92.

DESCRIPTORS: *Climate, Meteorology, Temperature, *Precipitation, *Albania.

Klyuchnikova, L. A. and Shekhter, F. N.
THE ROLE OF RADIANT AND TURBULENT HEAT EXCHANGE IN THE FORMATION OF THE TEMPERATURE STRATIFICATION OF THE BOUNDARY LAYER OF THE ATMOSPHERE (K Voprosu o Roli Luchistogo i Turbulentnogo Teploobmena v Formirovanii Temperaturnoi Stratifikatsii Pogranichnogo Sloya Atmosfery) tr. by Robert Sholiton. Oct 61 [11]p. 3 refs. AmMetSoc T-R-380+.
Order from OTS or SLA $1.60 62-24804

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1960, no. 94[156] p. 33-38.

DESCRIPTORS: *Atmosphere, *Boundary layer, Thermal radiation, Turbulence, Heat transfer, Temperature, Stratification, Moisture.

A comparison of experimental data and theory showed that the processes of heat and moisture exchange are interrelated and that heat exchange is an extremely essential factor in the formation of the average temperature stratification of the boundary layer of the atmosphere.

Kusano, K., Noguchi, K., and Sumino, M.
A PRACTICAL TECHNIQUE OF FORECASTING OROGRAPHIC PRECIPITATION, tr. by Noburu Hiraga. [1959] 34p. 12 refs.
Order from OTS or SLA $3.60 SCL-T-241

Trans. of Journal of Meteorological Research (Japan) 1957, v. 9, no. 11, p. 811-822.

DESCRIPTORS: *Meteorology, Weather forecasting, *Precipitation, Geophysics, *Mountains, Abundance, Mathematical prediction, Japan.

Lecce, B. and Trono, Del.
PERIODIC VARIATIONS OF THE MEAN BARIC FIELD AT 500 MB ON THE HEMISPHERIC SCALE AND THEIR USE IN EXTENDED RANGE FORECASTING, tr. by Angelo F. Spano. Aug 58, 11p. (5 figs. 2 tables omitted).
Order from OTS or SLA $1.60 59-12697

Trans. of Geofisica e Meteorologia (Italy) 1958, v. 6, nos. 1/2, p. 3-8.

DESCRIPTORS: *Weather forecasting, *Barometric pressure, *Periodic variations, Mathematical prediction, Upper atmosphere, Meteorological data, Precipitation, Statistical analysis.

Pivovarova, Z. I.
CHARACTERISTICS OF THE RADIATION REGIME DURING CLEAR WEATHER (Kharakteristika Radiatsionnogo Rexhima pri Yasnoi Pogode) tr. by Robert Sholiton. Nov 61 [22]p. 8 refs. AmMetSoc T-R-373 T-R-373+.
Order from OTS or SLA $2.60 62-24801

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1959, no. 96[158] p. 84-100.

DESCRIPTORS: *Thermal radiation, Weather stations, Atmosphere, Periodic variations, Meteorological data.

This article generalizes observational data of Soviet actinometric stations for the period 1952 - 1958 under clear sky conditions. It gives average values for the radiation balance according to latitudes (direct radiation on a perpendicular and horizontal surface, scattered, and total radiation) for each month of the period. The characteristics of the transparency of the atmosphere are given (the coefficient of transparency is reduced to mass 2). The monthly and annual sums of potential radiation are calculated according to latitude. (Translator?)

Romanova, E. N. and Kaulin, N. Ya.
THE METHODOLOGICAL PROBLEM OF MEASURING THE MINIMUM TEMPERATURE AT THE SURFACE OF THE SOIL (K Voprosu o Metodike Izmereniya Minimal'noi Temperatury u Poverkhnosti Pochvy) tr. by Robert Sholiton. Oct 61 [14]p. 11 refs. AmMetSoc T-R-385+.
Order from OTS or SLA $1.60 62-24808

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1960, no. 91[153] p. 62-70.

DESCRIPTORS: *Soils, *Surfaces, *Temperature, Weather stations, Weather forecasting.

This article gives an evaluation of the measurement of minimum temperatures at meteorological stations. On the basis of experimental studies it was found that the distribution of minimum temperatures near the earth depends on weather conditions: on clear nights the minimum is always observed at a height of 5 or 2 cm; the minimum can take place on the surface of the soil only when the sky is overcast or the sky condition is changing. This substantiates the recommendation that the network install a supplementary minimum thermometer at a height of 2 cm, which better reflects the conditions for frost damage to agricultural crops. It is also necessary to develop theoretical methods of calculating the minimum over the surface of the soil. (Author)

Tarnizhevskii, B. V.
THE ACCURACY OF DETERMINING THE MEAN MONTHLY AND ANNUAL SUMS OF RADIATION (O Tochnosti Opredeleniya Srednikh Mesyachnykh i Godovykh Summ Radiatsii) tr. by Robert Sholiton. Sep 61 [10]p. 14 refs. AmMetSoc T-R-370+.
Order from OTS or SLA $1.10 62-24803

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1959, no. 96[158] p. 101-106.

DESCRIPTORS: *Thermal radiation, Periodic variations, Determination, Distribution theory, Meteorological data.

This article examines the problems of objectively evaluating the accuracy of determining mean sums of radiation. For this purpose it is proposed to use familiar methods of mathematical statistics for determining the mean of a sample from an infinite general series with a normal distribution of the sign being investigated. It is noted that the monthly and annual sums of radiation follow a distribution which satisfactorily approximates the normal distribution. The accuracy of determining sums of radiation as a function of the norm and the number of years of observations has been tabulated. Examples of the accuracy of computing mean sums of radiation are cited from a 10-year series of observations for Pavlosk, Tashkent and Odessa. (Translator?)

Tseitin, G. Kh. and Orlenko, L. R.
THE STATIONARY DISTRIBUTION OF WIND, TEMPERATURE AND TURBULENT EXCHANGE IN THE BOUNDARY LAYER OF THE ATMOSPHERE UNDER VARIOUS STABILITY CONDITIONS (Statsionarnoe Raspredelenie Vetra, Temperatury i Turbulentnogo Obmena v Pogranichnom Sloe Atmosfery pri Razlichnykh Sostoyanyakh Ustoichivosti) tr. by Myron Ricci. Dec 61 [33]p. AmMetSoc T-R-387+.
Order from OTS or SLA $3.60 62-24802

Trans. of Glavnaya Geofizicheskaya Observatoriya [Leningrad]. Trudy (USSR) 1960, no. 94[156] p. 8-28.

DESCRIPTORS: *Atmosphere, *Boundary layer, Stability, Wind, Temperature, Turbulence, Distribution theory.

A method is given for solving the problem of the stationary structure of the boundary layer of the atmosphere as a function of the state of thermal stability in its surface layer. Based on a theoretical treatment, formulas are obtained which make it possible to determine the vertical profiles of temperature, wind velocity, and the coefficient of turbulent diffusion throughout the boundary layer-a determination according to the temperature gradient and the geostrophic wind velocity at the upper limits of the boundary layer and according to the known roughness of the underlying surface.

Zak, E. G. and Fedorova, A. A.
SOME RESULTS OF RADAR OBSERVATIONS ON THE FORMATION AND DEVELOPMENT OF PRECIPITATION IN STORM CLOUDS. [1962] 31p.
Order from ATS $39.85 ATS-00N58R

Trans. of Tsentral['naya] Aerolog[icheskaya] Observatoriya. Trudy (USSR) 1958, no. 19, p. 33-67. Another trans. is available from LC or SLA mi$3.00, ph$6.30 as 61-13093, DSIR NLL M.1762, 7 Mar 60, 40p.

DESCRIPTORS: *Clouds, *Radar analysis, *Precipitation, *Storms.

For abstract see Technical Translations 5: 305, 1961.

Frost Science

ICE ACCUMULATION IN THE FAR EAST. 12 July 61 [8]p.
Order from OTS or SLA $1.10 62-25042

Trans. from [Vsesoyuznoe Geograficheskoe Obshchestvo. Izvestiya] (USSR) 1961 [v. 93, no. 1].

DESCRIPTORS: *Ice, Transport properties, *Asia.

Ananyan, A. A.
ICE LIBERATION MECHANISM IN FROZEN GROUND DURING THE ELECTROOSMOSIS PROCESS. [1960] 4p. 6 refs. MDF A-153.
Order from OTS $0.50 62-11548

Trans. of Moscow U. Vestnik. [Seriya] M[atematiki] M[ekhaniki] A[stronomii] F[iziki] K[himii] (USSR) 1959 [v. 14] no. 4, p. 149-151.

DESCRIPTORS: *Electroosmosis, Moisture, *Soils, Freezing, *Ice, Water.

In contrast to water in a space, unfrozen water in frozen finely-dispersed ground is characterized by a distorted structure. Upon the displacement of the unfrozen water into the cathodic zone by electroosmosis forces, the molecules of unfrozen water emerge from the sphere of the directing interaction with the active centers of the surface of the mineral particles and they acquire a structure similar to the structure of water in a space. Consequently, under the conditions of a cathodic zone, this part of the water transforms intc ice. In finely-dispersed frozen ground, the ice-liberation mechanism during the process of moisture migration under the influence of a thermal gradient is analogous to the mechanism of ice-liberation for the displacement of moisture under the influence of an electric gradient. (Author)

Dyunin, A. K.
VERTICAL DISTRIBUTION OF SOLID FLUX IN A SNOW-WIND FLOW (O Raspredelenii Raskhoda Snegovetrovogo Potoka po Vysote) tr. by G. Belkov. 1961, 16p. 6 refs. NRCC Technical Trans. 999.
Order from NRCC $1.00 NRCC C-3903

Trans. of [Akademiya Nauk SSSR]. Transportno-Energeticheskii Institut [Novosibirsk]. Trudy, 1954, no. 4, p. 49-58.

DESCRIPTORS: *Snow, Deposits, Control, *Wind, Velocity, Turbulent flow.

Hoeck, Erwin.
INFLUENCE OF RADIATION AND TEMPERATURE ON THE MELTING PROCESS OF THE SNOW COVER (Der Einfluss der Strahlung und der Temperatur auf den Schmelzprozess der Schneedecke) tr. by Katherine Martinoff. Jan 58 [79]p. 36 refs. SIPRE Trans. 49.
Order from OTS or SLA $7.60 59-18580

Trans. of Beiträge zur Geologi[schen Karte] der Schweiz. Geotechnische Serie (Switzerland) 1952, no. 8, p. 1-36.

DESCRIPTORS: *Snow, Melting, Drainage, Temperature, Radiation effects, Thermal radiation, Sun, Sky, Atmosphere, Albedo (Astronomy), Meteorology, Switzerland.

Loewe, Fritz.
EXPLORATION OF "INLAND ICE" GREENLAND AND ANTARCTICA (Die Erforschung der "Inlandeise' Grönland; Antarktis) tr. by Katherine Martinoff. May 59 [7]p. 13 refs. SIPRE Trans. 58.
Order from OTS or SLA $1.10 60-13044

Trans. of Umschau in Wissenschaft und Technik (West Germany) 1956, [v. 56] no. 4, p. 110-113.

DESCRIPTORS: *Ice, *Greenland, *Antarctic regions, Exploration.

Istoshin, Yu. V.
AMERICAN INVESTIGATIONS OF THE PHYSICAL PROPERTIES OF SEA ICE (Ob Amerikanskikh Issledovaniyakh Fizicheskikh Svoistv Morskogo L'da) tr. by Robert Sholiton. Jan 62 [7]p. 23 refs.
AmMetSoc T-R-388 +.
Order from OTS or SLA $1.10 62-24809

Trans. of Meteorologiya i Gidrologiya (USSR) 1960, no. 11, p. 46-48.

DESCRIPTORS: *Sea water, *Ice, Physical properties, Arctic regions.

A survey.

Loshchilov, V. S.
THE USE OF AERIAL PHOTOGRAPHY IN ICE RECONNAISSANCE TO DETERMINE THE MEAN THICKNESS OF THE ICE COVER (Ispol'zovanie Aerofotos"emki pri Ledovoi Razvedke dlya Opredeleniya Srednei Tolshchiny Ledyanogo Pokrova) tr. by Richard M. Holden. July 60 [9]p. 2 refs.
AmMetSoc T-R-306+ ; AD-252 325.
Order from OTS or SLA $1.10 61-19026

Trans. of Problemy Arktiki i Antarktiki (USSR) 1959, no. 1, p. 81-85.

DESCRIPTORS: *Ice, Thickness, *Aerial photography, Sea water, Physical properties, Stereoscopic height finders, Photographic analysis, Density.

The method of determining the average thickness of ice from aerial photographs is discussed. The essence of the method is the stereophotogrammetric measurement of the excess of the surface of the individual ice fields above the water level. To compute the mean thickness, it is necessary to know the ice density, the thickness, and the density of the snow cover on the ice, and the density of the surface layer of the water. Methods by which these magnitudes can be estimated are described and examined. (ASTIA abstract)

Schneider, T. R.
THE CALCULATION OF THE AMOUNT OF SALT REQUIRED TO MELT ICE AND SNOW ON HIGHWAYS (Die Berechnung der zur Auflosung von Schnee- und Eiskrusten Notwendigen Salzstreumengen) tr. by D. A. Sinclair. 1962, 42p. 8 refs. NRCC Technical trans. 1004.
Order from NRCC $2.50 NRCC C-3936

Trans. of Eidgenossisches Institut für Schnee- und Lawinenforschung. Interner Bericht (Switzerland) 1960, no. 328, 27p.

DESCRIPTORS: *Roads, *Ice, Snow, *Snow removal, Melting, *Salts, Determination.

Geodesy

AERIAL SURVEYING AND GEODESY. 16 Feb 62, 25p. JPRS: 12504.
Order from OTS $0.75 62-11170

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Geodeziya i Aerofotos"emka (USSR) 1961, no. 3, p. 103-106 and 155-158.

DESCRIPTORS: *Aerial photography, Photography, *Mapping, *Geodesics, Conferences.

Contents:
Favorable periods for aerial topographic surveying depending on water level fluctuation in rivers, seas, and lakes, by L. A. Bogomolov
Scientific-technical conference of the Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography.

DEVELOPMENT OF PHOTOGRAMMETRY AND AERIAL PHOTOGRAPHY IN (EAST) GERMANY. 11 Aug 61 [14]p. 2 refs. JPRS: 8705.
Order from OTS or SLA $1.60 62-19736

Trans. of reprint of Bildmessung und Luftbildwesen (West Germany) 1961, no. 1, p. 8-15.

DESCRIPTORS: *Aerial photography, Photography, *Mapping, Instrumentation, Stereoscopic map plotters, Optics, *East Germany, Geodesics.

ENGINEERING DRAWINGS: FORMATS. [1962] [2]p. (2 tables omitted). [DSIR] NLL M 3302.
Order from OTS or SLA $1.10 62-23914

Trans. of [Russian State] Standard GOST 3450-59 (replaces GOST 3450-52) gr. G01, effective 1 Jan 60.

DESCRIPTORS: *Drafting, Engineering, Standards, Geodesics.

INSTRUCTION FOR FIRST-, SECOND-, THIRD- AND FOURTH- ORDER LEVELLING. 5p. MTWL: 1086.
Order from OTS or ETC $1.40 62-26037

Trans. of table of contents of mono. Instruktsiya po Nivelirovaniyu I, II, III i IV Klassov, Moscow, 1957.

DESCRIPTORS: *Geodesics, Indexes.

Brykin, P. A. and Kargashina, V. A.
ON TECHNICALLY WELL-FOUNDED OUTPUT STANDARDS FOR PHOTOGRAPHIC LABORATORY WORK (O Tekhnicheski Obosnovannykh Normakh Vyrabotki na Fotolaboratornye Raboti). 7p. MTWL: 1079.
Order from OTS or ETC $1.55 62-26030

#Trans. of Geodeziya i Kartografiya (USSR) 1960, no. 3, p. 55-62.

DESCRIPTORS: *Aerial photography, Geodesics, *Laboratories.

Izmaĭlov, P. I., Kislov, V. V., and others.
TOPOGRAPHY AND AERIAL PHOTOGRAPHY. 7p. MTWL: 1083.
Order from OTS or ETC $1.55 62-26034

Trans. of table of contents of mono. Topografiya i Aerofototopografiya, Moscow, 1959.

DESCRIPTORS: *Aerial photography, *Topographic cameras, Indexes.

Jeřabek, O. and Ledvinka, V.
INTERPRETATION OF AERIAL AND TERRESTRIAL PHOTOGRAPHS. 6p. MTWL: 1088.
Order from OTS or ETC $1.55 62-26039

Trans. of table of contents of mono. Cteni Leteckych a Pozemnich Snimkii, Prague, Praha, 1959.

DESCRIPTORS: *Aerial photographs, *Geodesics, Aerial photography, Mapping, Indexes.

Kislov, V. V.
EXPERIMENT OF COMPILING A MOSAIC WITH CONTOURS BY MEANS OF THE PHOTOCARTOGRAPH DESIGNED BY F. V. DROBYSEV (Opyt Izgotovleniya Fotoplana s Gorizontalyami na Fotokartografe F. V. Drobyseva) 5p. MTWL: 1077.
Order from OTS or ETC $1.40 62-26028

#Trans. of Geodeziya i Kartografiya (USSR) 1960, no. 5, p. 33-37.

DESCRIPTORS: Aerial photography, *Aerial photographs, *Mapping.

Kozevnikov, N. P.
USING THE INDICATIONS OF RADAR+ALTIMETER AND STATOSCOPE WHEN MAPPING IN SCALES OF 1:10.000 AND 1:25.000 (Ispol'zovanie Pokazanif Radiovysotomera i Statoskopa pri Sozdanii Kart Masstabov 1:10.000 i 1:25.000) 11p. MTWL: 1078.
Order from OTS or ETC $1.55 62-26029

#Trans. of Geodeziya i Kartografiya (USSR) 1960, no. 4, p. 36-43.

DESCRIPTORS: Aerial photography, *Aerial photographs, *Radar, *Mapping, Altimeters.

Maslov, A. V., Larchenko, E. G., and others.
GEODESY. 9p. MTWL: 1082.
Order from OTS or ETC $1.55 62-26033

Trans. of table of contents of mono. Geodeziya, Moscow, 1958.

DESCRIPTORS: *Geodesics, Indexes.

Modrinski, N. I.
OUTLINE OF THE ACTIVITY OF THE POLISH STATE GEODETIC SERVICE. 17 Oct 61 [5]p. JPRS: 10510.
Order from OTS or SLA $1.10 62-19528

Trans. of #Geodeziya i Kartografiya (USSR) 1961, no. 6, p. 67 (prepared from material originally pub. in Przeglad Geodezyjny (Poland) 1960 [v. 32] no. 12).

DESCRIPTORS: *Geodesics, *Poland.

Shershen', A. I.
AIR PHOTOGRAPHY. 47p. MTWL: 1087.
Order from OTS or ETC $2.79 62-26038

Abstract trans. of mono. Aerofotos"emka, Moscow, 1958.
Another trans. is available from OTS $3.50 as 61-11436, 1961, 344p.

DESCRIPTORS: *Aerial photography, *Aerial cameras, Photographic film, *Optical images, Indexes

Zacher, G.
ON THE ACCURACY OF THE METHOD OF GEODETIC INTERSECTIONS. 10 Nov 61 [19]p. JPRS: 11062.
Order from OTS or SLA $1.60 62-19737

Trans. of Vermessungstechnik (East Germany) 1961, v. 9, no. 5, p. 145-149.

DESCRIPTORS: *Geodesics, Theory, Geodetic data, Errors, Geophysical prospecting.

Geography

Bora, Gyula.
THE SIGNIFICANCE AND PROBLEMS OF RAYON RESEARCH IN THE ECONOMIC GEOGRAPHY OF HUNGARY (A Rayonkutatas Jelentosege es Problemaja a Magyar Gazdasagfoldrazjban). 22 May 61 [17]p. JPRS: 9306.
Order from OTS or SLA $1.60 62-19426

Trans. of Foldrajzi Ertesito (Hungary) 1960, v. 9, no. 2, p. 129-138.

DESCRIPTORS: *Geography, *Economics, Hungary, Social sciences, Labor, Industry, Agriculture, Production, *Research program administration.

Klumov, S. K.
LIGBANKEN VAN DE ZEEHONDEN (Callorhinus Ursinus) EN VERBLIJFPLAATSEN VAN ZEEOTTERS (Enhydra Lutris) OP DE KURILEN EILANDEN, EN EN ORIENTERENDE TELLINGEN (Beregovye Lezhbisha Kotikov (Callorhinus Ursinus) i Mesta Obitaniya Kalanov (Enhydra Lutris) na Kuril'skikh Ostrovakh i Orientirovochnoe Opredelenie ikh Chislennosti) (Sand-banks of the Seals and Places of Abode of the Sea-otters on the Kurile Islands, and Orientating Enumeration), tr. by S. Michailoff. 6p. MTWL: 1092 (text in Dutch).
Order from OTS or ETC $1.55 62-26049

Trans. of Akademiya Nauk SSSR. Doklady, 1957. v. 117, no. 1, p. 153-156.

DESCRIPTORS: Sand, Water, *Callorhinus Ursinus, *Enhydra Lutris, Kurile Islands.

Lang, Sandor.
GEOGRAPHIC RESEARCH TASKS ON THE SOUTHEASTERN ALFOLD REGION. 3 Nov 61 [14]p. JPRS: 10946.
Order from OTS or SLA $1.60 62-19503

Trans. of Foldrajzi Kozlemenyek (Hungary) 1961, v. 9, no. 2, p. 176-178.

DESCRIPTORS: *Geography, *Hungary.

Geology

Gurau, Andrei.
ACTIVITY OF RUMANIAN GEOLOGISTS ABROAD. 19 Feb 62 [8]p. JPRS: 12565.
Order from OTS or SLA $1.10 62-15930

Partial trans. (some parts summarized) of Natura (Rumania) 1961, v. 13, no. 4, p. 9-15.

DESCRIPTORS: *Geology, *Geophysical prospecting, *Rumania, *Geophysicists.

Khou, Khun-fey.
SPIRIFERIDAE OF LOWER DEVONIAN AND EIFELIAN DEPOSITS OF THE SOUTHERN ZONE OF GUANSI. [1961] 43p. (figs. tables omitted).
Order from OTS or SLA $4.60 61-15873

Trans. of [Ku Sheng Wu Hstieh Pao] (Chinese People's Republic) 1959, v. 7, no. 6, p. 462-476.

DESCRIPTORS: *Paleoecology, Deposits, *Mollusca, Geology, China

The forms described here were collected during field work in 1957 near Lyu-Tszin, district of Khon-Syan', the Southern part of the province of Guansi. The fossils were found in the Yuy-Tszian' suite, in Nagaolin schists. Furthermore the collections gathered by the geological survey teams, which worked in the province of Guansi during the last three years, have been used in this research. The paper provides a description of the following 8 species belonging to 4 different genera; Eospiriferina nakaolingensis sp. nov, E. wangi sp. nov, Acrospirifer tonkinensis (Mansuy) A. cheechiel (Kon.), A. papaoensis (Grab.), Indospirifer chui (Grab.), I. kwangsiensis sp. nov, and Elytha transversa Wang.

Kul'kov, N. P.
A NEW GENUS OF SPIRIFERIDAE FROM EIFELIAN DEPOSITS OF THE NORTH-EASTERN SLOPE OF ASLAIR. [1961] 6p. (2 drawings omitted) 2 refs.
Order from OTS or SLA $1.10 61-15872

Trans. of [Akademiya Nauk SSSR]. Doklady, 1960, v. 132, no. 4, p. 929-931.
Another trans. is available from AGI $8.00

DESCRIPTORS: *Paleoecology, Deposits, *Mollusca, Calcite, Geology

Lavrushin, Yu. A.
THE STRATIGRAPHY OF THE QUATERNARY SEDIMENTS IN THE RIVER VALLEY OF THE MIDDLE TURUKHAN. 8 June 61, 27p. (7 figs. omitted) 29 refs.
Order from OTS or SLA $2.60 61-27738

Trans. of [Akademiya Nauk SSSR. Geologicheskii Institut. Trudy] 1959, v. 32, p. 122-137.

DESCRIPTORS: *Geology, *Sedimentation, *Stratification, Geological survey, Rock, Sand, Soils, Glaciers, *Paleoecology.

Lemakin, V. V.
THE STRATIGRAPHIC DIVISION OF THE QUATERNARY SYSTEM OF THE BAIKAL ZONE. 20 June 61 [44]p. (7 tables 10 figs. omitted) 13 refs.
Order from OTS or SLA $4.60 61-27736

Trans. of [Akademiya Nauk SSSR. Geologicheskii Institut. Trudy] 1959, v. 32, p. 45-78.

DESCRIPTORS: *Geology, *Stratification, *Sedimentation, *Paleoecology, Geological survey, Glaciers, Pollen, Spores.

Molchanov, I. I. and Tyzhnov, A. V.
EARLY METAMORPHISM OF SEDIMENTARY ROCKS AND ITS VALUE IN PROSPECTING FOR MINERAL FUEL. [1962] 9p.
Order from ATS $17.95 ATS-37P59R

Trans. of Razvedka i Okhrana Nedr (USSR) 1961, v. 27, no. 5, p. 8-15.

DESCRIPTORS: Minerals, Fuels, *Geophysical prospecting, Sedimentation, *Rock, *Geology.

Nikiforova, K. V. and Alekseeva, L. I.
THE BORDER LINE OF THE TERTIARY AND QUATERNARY SYSTEMS ACCORDING TO DATA OF THE MAMMAL FAUNA. 28 June 61, 29p. (2 tables omitted) 51 refs.
Order from OTS or SLA $2.60 61-27735

Trans. of [Akademiya Nauk SSSR. Geologicheskii Institut. Trudy] 1959, v. 32, p. 7-21.

DESCRIPTORS: Geology, *Mammals, *Animals, *Paleoecology, Sedimentation, Stratification.

Radchenko, O. A. and Sheshina, L. S.
THE GEOCHEMISTRY OF PORPHYRINS IN PETROLEUM (K Voprosu o Geokhimii Porfirinov Neftei). 1962, 46p. 73 refs. PL-480 Int.
Order from OTS $0.50 61-31073

Trans. of Geologicheskii Sbornik, Leningrad (USSR) 1955, v. 33, no. 1, p. 274-331.

DESCRIPTORS: *Petroleum, *Porphyrins, *Geochemistry.

A quantitative basis was given to the determination of the porphyrin content in bitumens. Experiments showed that the porphyrins present in mineral fuels and in the organic material found in rocks are represented by vanadium and nickel complexes. In petroleum and in bitumens derived from it the vanadium-porphyrin complexes are concentrated in the asphaltic-tarry fraction, while the nickel complexes are concentrated in the oil fraction. The vanadium-porphyrin

complexes are characteristic of the secondarily sulfurated samples, and the nickel complexes are more or less uniformly distributed in the sulfurated and low-sulfur samples (if only these cases are taken into account in which porphyrins are present in the latter). Sulfurated petroleum and its nearest derivatives are distinguished by a high enrichment in porphyrins as compared with low-sulfur samples, in which porphyrins are either absent or present in negligible amounts. The quantity of porphyrins in roughly classified petroleum corresponds to its sulfuration, through no proportionality between the contents of sulfur and porphyrins in petroleum has been found. The parallelism in the increase of the contents of sulfur, porphyrins, asphaltic substances, vanadium, and the value of the ratio of vanadium to nickel, passing from low-sulfur petroleum via secondarily sulfurated petroleum, sulfurated tars and asphalts, to sulfurated asphaltites allows the arrangement of the listed bitumens in a sequence accordingly.

Oceanography

TECHNICAL HANDBOOK ON DETERMINATION OF THE PRIMARY PRODUCTION OF ORGANIC MATTER IN RESERVOIRS BY THE RADIOCARBON METHOD. [1961] [20]p. (4 figs. omitted) 19 refs. [DSIR NLL] M. 3299.
Order from OTS or SLA $1.60 62-15254

Trans. of unidentified Russian mono., Minsk, 1960.

DESCRIPTORS: *Algae, Dams, Photosynthesis, *Organic materials, Production, Carbon, Radioactive isotopes, *Marine biology, Carbon dating

TWO CONFERENCES ON SOVIET OCEANOGRAPHIC STUDIES. 19 Feb 62 [8]p. JPRS: 12553.
Order from OTS or SLA $1.10 62-24785

Trans. of Okeanologiya (USSR) 1961, v. 1, no. 4, p. 761-763.

DESCRIPTORS: Conferences, *Oceanography, Aral Sea, Caspian Sea, *Oceans, Arctic regions.

Contents:
The work of the section devoted to the study on the Arctic Ocean, by P. A. Gordienko and V. V. Panov
An extended session of the section devoted to the study of the Aral and Caspian Sea areas on 24 Mar 61 at the USSR Academy of Sciences, Soviet National Committee on Oceanography, by A. D. Dobrovol'skii.

Bark, L. S., Ganson, P. P. and Meister, N. A.
TABLES OF THE SPEED OF SOUND IN SEA WATER. [1962] 182p.
Order from ATS $15.50 ATS-19P59R

Trans. of unidentified mono. [pub. by] Academy of Sciences USSR, Institute of Oceanology, Computation Center, 1962, 182p.

DESCRIPTORS: *Sea water, Water, *Sound transmission, *Underwater sound transmission, Velocity, Tables.

Lignau, N. G.
THE PROCESS OF MARINE FOULING (Protsess Obrastaniya v More) tr. by M. Slessers. 1956 [40]p. 11 refs. HO Trans-8.
Order from OTS or SLA $3.60 62-13757

Trans. of [Gidrobiologicheskii Zhurnal] (USSR) 1923/24, v. 2/3, no. 11/12, p. 280-290 and 1925/26, v. 4/5, no. 1/2, p. 1-10.

DESCRIPTORS: *Fouling, Underwater objects, Marine biology, Deposits, Ocean bottom

Sysoev, N. N. and Volkov, V. G.
A GUIDE TO AN ELECTROMAGNETIC METHOD OF MEASURING THE VELOCITY OF SEA CURRENTS FROM A SHIP UNDER WAY. [1962] [37]p. (15 figs. omitted) 4 refs. [NLL] M1438.
Order from OTS or SLA $3.60 62-24795

Trans. of Akademiya Nauk SSSR. Institut Okeanologii Trudy, 1957, v. 24, p. 173-199.

DESCRIPTORS: *Oceanography, *Ocean currents, Velocity, Measurement, Instrumentation, Electromagnetic properties.

Methods of electromagnetic current measurement and the operation of Soviet equipment which has been developed for this purpose are described.

Yudanov, I. G.
THE FIRST VOYAGE OF THE PINRO HERRING RESEARCH RECONNAISSANCE EXPEDITION TO THE NORTHWEST ATLANTIC IN THE SUMMER OF 1960, tr. by E. R. Hope. Dec 61, 5p. 1 ref. DSIS T 362 R.
Order from NRCC NRCC C-3874

Trans. of Okeanologiya (USSR) 1961 [v. 1] no. 4, p. 756-757.

DESCRIPTORS: *Fishes, *Herring, Food, Marine biology, Underwater object locators, Sonar equipment.

Physics of the Atmosphere

Gringauz, K. I. and Rudakov, V. A.
MEASUREMENTS OF THE ELECTRON CONCENTRATION IN THE IONOSPHERE AT ALTITUDES OF 420-470 km MADE DURING THE IGY WITH THE AID OF RADIO WAVES EMITTED FROM GEOPHYSICAL ROCKETS OF THE ACADEMY OF SCIENCES USSR (Izmereniya Elektronnoi Kontsentratsii v Ionosfere do Vysot 420-470 k.m, Provedennye vo Vremya MGG pri Pomoshchi Radiovoln, Izluchavshikhsya s Geofizicheskikh Raket AN SSSR). [1962] [45]p. (foreign text included) 19 refs.
Order from OTS or SLA $4.60 62-14239

Trans. of Iskusstvennye Sputniki Zemli (USSR) [1961] v. 6, p. 48-62.

DESCRIPTORS: *Electrons, Density, Measurement, *Atmospheric sounding, Instrumentation, *Sounding rockets, Rockets, Geophysics, Radio waves, Propagation, Magneto-optic rotation.

The present paper investigates problems concerning the methods of measuring the dispersion of radiowaves and the Faraday effect, employed for determining the electron concentration n_e, and gives the results of measurements made during three vertical firings of geophysical rockets to altitudes of 450-470 km in 1958. These measurements made at different times of the day and year make it possible to determine the altitude distribution of n_e in the ionospheric region which includes a part of the so-called external ionosphere (lying over the maximum of the F layer and completely inaccessible to conventional radiosounding methods of the ionosphere from the Earth). The measurements were made over the same geographical point and with the same method. (Author)

Gusev, V. D. and Mirkotan, S. F.
SOME ANOMALIES IN THE STUDY OF IONOSPHERIC DRIFTS (O Nekotorykh Anomaliyakh pri Issledovanii Ionosfernykh Dreifov) tr. by Burton Hobson. Apr 61 [11]p. 5 refs.
Am-MetSoc-T-R-376; AD-273 433.
Order from OTS or SLA $1.60 62-23492

Trans. of Issledovaniya Ionosfery [i Meteorov: Sbornik Statei] (USSR) 1960, no. 3, p. 77-82.

DESCRIPTORS: *Ionospheric disturbances, *Electromagnetic fields, Reflection *Drift, Wind, Statistical processes, *Statistical functions.

This work is based on the study of large ionospheric irregularities made during the IGY program for the period January, 1957 through January, 1958. A diurnal relationship was found between the frequency of appearance of the imaginary values of V_c, the deviation from the linear of the front of apparent velocities, and the differences in the autocorrelation functions at the observation points. These anomalies reach maximum values during the sunlit part of the day, indicating a connection between the creation and movement of irregularities and the intensity of the solar radiation.

Toth, Pal.
A NOMOGRAPH FOR DETERMINING THE TEMPERATURE ADVECTION IN FREE ATMOSPHERE.
16 Jan 62 [12]p. JPRS: 12007.
Order from OTS or SLA $1.60 62-19596

Trans. of Idojaras (Hungary) 1961 [v. 65] no. 1, p. 23-29.

DESCRIPTORS: *Atmosphere, Temperature, *Heat transfer, Determination, *Nomographs.

ENGINEERING

REPORT ON THE CIVIL DEFENSE IN THE USSR, April 4, 1957. AF 1092884, concerning USSR. 31p. 64 refs.
Order from OTS or ETC $2.47 62-26062

Trans. of Soviet open sources, 1937-1957.

DESCRIPTORS: *Civilian defence systems, *USSR, Military organization.

Chemical Engineering

Blidin, V. P.
CONTRIBUTION AU PROBLEME DE L'EXTRACTION DU SEL DE CUISINE A PARTIR DES SAUMURES DU LAC DE GRAND MANYTCH (GOUDILO) (Production of Table Salt from the Brines of Lake Bolshoi Manych, Gudilo). 5p. (foreign text included). 5 refs. F/R-2564. (text in French).
Order from OTS or ETC $1.55 62-28001

Trans. of Zhurnal Prikladnoĭ Khimii (USSR) 1951, v. 24, no. 10, p. 1096-1097.

DESCRIPTORS: *Sodium compounds, *Chlorides, Salts, Production, Lakes.

Hopf, Heinrich and Siebert.
MANUFACTURING PROCESS FOR POLYMERIZATION PRODUCTS OF ETHYLENE. May 62, 1080 words.
Order from LSA $10.00

Trans. of German patent 745,425, cl. 39c, gr. 25 01, 2 Dec 43.

DESCRIPTORS: *Ethylenes, *Polymers, Polymerization, Manufacturing methods.

Iordan, Ion.
NEW SUB-BRANCHES IN THE CHEMICAL AND RUBBER INDUSTRIES OF THE RUMANIAN PEOPLE'S REPUBLIC. 7 Feb 62 [12]p. JPRS: 12375.
Order from OTS or SLA $1.60 62-15942

Partial trans. (some parts summarized) of Natura (Rumania) 1961, v. 13, no. 3, p. 43-50.

DESCRIPTORS: *Chemical industry, *Rubber, Industry, *Rumania.

Kravets, V. R., Malkov, M. P., and Ivanov, S. S.
SEPARATION OF HYDROCARBON GASES FOR INDUSTRIAL SYNTHESIS. [1961] 3p.
Order from OTS or SLA $1.10 62-10898

Condensed trans. of Promyshlennost' Organicheskoi Khimii (USSR) 1940, v. 7, no. 10, p. 552-562.

DESCRIPTORS: *Hydrocarbons, *Gases, Separation, Synthesis, Industrial plants, Chemical industry.

Lepeshkov, I. N. and Bodaleva, N. V.
ORDRE DE CRISTALLISATION DES SELS PENDANT L'EVAPORATION DE l'EAU DE LA MER d'ARAL (O Poryadke Kristallizatsii Solei pri Isparenii Vody Aral'skogo Morya) (Order of Crystallization of Salts on Evaporation of Aral Sea Water). 5p. (foreign text included). 6 refs. F/R-2584. (text in French).
Order from OTS or ETC $1.55 62-28006

Trans. of Akademiya Nauk SSSR. Doklady, 1952, v. 83, no. 4, p. 583-584.

DESCRIPTORS: *Sea water, *Salts, Crystallization, Evaporation.

Natta, G., Asta, G. dall' and others.
STEREOSPECIFIC POLYMERIZATION OF VINYL ETHERS. [1961] [19]p. 21 refs.
Order from SLA $1.60 62-14035

Trans. of Angewandte Chemie (West Germany) 1959, v. 71 [no. 6] p. 205-210.
Other translations are available from SLA mi$2.40, ph$3.30 as 59-15761 [1959] 14p. and mi$2.70, ph$4.80 as 59-17204 [1959] 27p.

DESCRIPTORS: *Vinyl radicals, *Ethers, Polymerization, Catalysts, Polymers, Molecular structure, Chemical reactions.

The stereospecific polymerization of vinyl ether with many catalysts having weak cationic activity has been investigated. With several of these catalysts, the polyvinyl ether obtained has considerably higher degree of crystallinity than previously known polyvinyl ethers. This study shows that fundamentally the presence of a solid phase, absolutely required for the α-olefins, is not necessary for stereospecific polymerizations, when, in addition to the vinyl double bond, a second, conjugated, double bond is present, or when there is a free, available pair of electrons. The polymerization of vinyl ethers with catalysts of various kinds (Al- and Ti-compounds) and the properties of the polymers obtained are explained in detail. (Author)

Ocskay, Gyorgy.
PRESENT AND FUTURE OF THE PRODUCTION OF PURE REAGENTS (Finomvegyszergyartasunk Helyzete es Perppektivai). 31 July 61 [10]p.
JPRS: 9710.
Order from OTS or SLA $1.60 62-19590

Trans. of Magyar Tudomanyos Al ademia Kemiai Tudomanyok Osztalyanak Koszlemenyei (Hungary) 1960, v. 14, no. 3, p. 369-376.

DESCRIPTORS: *Reagents, Production, Purification, Chemical industry, Hungary.

Pitz, H.
THE GASES FROM THE LOW-TEMPERATURE CARBONIZATION OF HARD COALS, THEIR PROPERTIES, USES, AND PREPARATION. [1959] 27p. (6 figs. 6 tables omitted) 2 refs.
Order from OTS or SLA $2.60 59-18540

Trans. of [GWF; das] Gas- und Wasserfach Germany) 1942, v. 85, p. 321-327.

DESCRIPTORS: *Coal, *Carbonization, Temperature, *Coal gas, Gases, Production, Physical properties, Chemical properties.

Plockinger, E. and Randak, A.
FORMATION AND SEPARATION OF SULPHIDE INCLUSIONS IN STEEL AND CAST IRON. Feb 62.
Order from BISI £1 10s BISI-2503

Trans. of Radex Rund[schau] (Austria) 1957, no. 5/6, p. 768-770.

DESCRIPTORS: *Steel, *Cast iron, Sulfides, Impurities, Separation.

Pohle, G.
COS FORMATION IN COMPRESSED INDUSTRIAL GASES CONTAINING CO AND H_2S. [1962] 4p.
Order from ATS $5.85 ATS-56P59G

Trans. of Chem[ische] Tech[nik] (East Germany) 1961, v. 13, no. 10, p. 594-595.

DESCRIPTORS: *Carbonyl radicals, *Sulfides, *Carbon compounds, *Monoxides, *Hydrogen compounds, *Waste gases.

Ryshavy, D., Balaban, L. and others.
OXIDATION OF ISOTACTIC POLYPROPYLENE (Okislekie Izomakmicheskogo Polipropilena). [1961] [12]p. 5 refs.
Order from OTS or SLA $1.60 62-14283

Trans. of Vysokomol[ekulyarnye] Soed[ineniya] (USSR) 1961, v. 3, no. 7, p. 1110-1115.

DESCRIPTORS: *Propenes, Polymers, *Oxidation, Stability, Molecular weight, Chemical reactions, Processing, Production, Chemical industry.

Experimental results on the oxidation of polypropylene between 120 and 150°C are given. A polypropylene with a molecular weight of 400,000 and an ash content of 0.5% was investigated. The degradation products decrease the rate of oxidation. The overall activation energy of oxidation between 120° and 150°C was E = 29 kcal, the activation energy of acetaldehyde formation E = 30.4 kcal, and the activation energy of volatile acid formation E = 22 kcal. As the result of hydrogen peroxide decomposition, the formation of alcohols is the dominating reaction in the first stage of oxidation at 150°. Less than 10% of the total number of reactions leads to the formation of aldehydes.

Sergienko, S. R., Delone, I. O. and others.
COMPOSITION AND PROPERTIES OF THE TARRY PORTION OF IL'SK CRUDE. PT. 2 of Investigation of the Composition and Properties of the High-Molecular-Weight Portion of Petroleum. [1962] 8p.
Order from ATS $9.10 ATS-14N58R

Trans. of Akad[emiya] Nauk SSSR. Inst[itut] Nefti. Trudy, 1955, v. 6, p. 71-78.

DESCRIPTORS: *Petroleum, *Molecular weight.

Strazh, A. G.
PRODUCT COST CALCULATION IN PETROLEUM REFINING. [1962] 4p.
Order from ATS $7.20 ATS-43N58R

Trans. of Khim[iya] i Tekhnol[ogiya] Topliv i Masel (USSR) 1961, v. 6, no. 9, p. 51-54.

DESCRIPTORS: *Petroleum, Processing, Costs.

Yamaguchi, T.
MANUFACTURE OF PROSPHORIC ACID BY THE WET PROCESS. [1962] 6p.
Order from ATS $9.75 ATS-59P60J

Trans. of Japanese [published] patent no. 1422 (1957) appl. 6 Nov 54, pub. 27 Feb 57.

DESCRIPTORS: *Phosphoric acids, Manufacturing methods.

Civil Engineering

Lossier, H.
THE PATHOLOGY AND THERAPEUTICS OF REINFORCED CONCRETE, 2D ED., tr. by D. A. Sinclair. 1962, 147p. NRCC Technical trans. 1008.
Order from NRCC $7.50 NRCC C-3954

Trans. of mono. La Pathologie et Thérapeutique du Beton Armé, 2d ed., Paris, 1955, 152p.

DESCRIPTORS: *Reinforced concrete, Failure (Mechanics), Construction, Structures, Foundations (Structures), Buildings, Roads, Materials, Mechanical properties, Stresses, Fracture (Mechanics), Soils, Bridges, Beams, Applied mechanics.

Nikolaev, B. A.
PILE DRIVING BY ELECTROOSMOSIS. Apr 62, 1v.
Order from CB $12.50

Trans. of mono. [Pogruzheniesvai s Pomoshchyu Elektroosmosa, Leningrad, 1960, 94p.].

DESCRIPTORS: *Electroosmosis, Railroad bridges, Railroad tracks, Construction, Soils, Civil engineering.

Electrical and Electronic Engineering

AUTOMATION IN THE MILITARY FIELD (L'Automation dans le Domaine Militaire) tr. by Layton. [1959] 6p. H-3544 B.
Order from OTS or SLA $1.10 59-21147

Trans. of [Direction de la Documentation]. Notes et Etudes Documentaires (France) 1958, 19 Nov, p. 33-34.

DESCRIPTORS: *Automation, Computers, Control systems, Electronic equipment, *Military operations, *National defense, *Industrial research, Radar, Television.

CZECHOSLOVAK MINIATURE ELECTRONIC TUBES [SELECTED PARTS]. 26 Aug 61 [37]p. JPRS: 8791.
Order from OTS or SLA $3.60 62-19471

Trans. of mono. Ceskoslovenske Miniaturni Elektronky, n.p., n.d., p. 133-144, 151-162, 222-226.

DESCRIPTORS: Czechoslovakia, *Miniature electron tubes, Miniature electronic equipment, Wiring diagrams, *Electron tubes.

FRENCH AIR FORCE SPECIFICATIONS FOR ELECTRONIC TUBES. 2 ED; ed. and tr. by F. A. Raven, Science Translation Service. May 57, 165p. STS-257; Bureau of Ships Translation 629.
Order from OTS or SLA $12.00 59-12041

Trans. of mono. Specifications Applicables aux Tubes Electroniques Air. 2d ed. Paris, 3 Jan 56.

DESCRIPTORS: *Electron tubes, Specifications, Air force, France, Electronic equipment.

RADIOTECHNIQUE, 1956, VOL. 11, NO. 4: SELECTED ARTICLES. [1961] [93]p. 31 refs. F-TS-9181.
Order from OTS or SLA $8.60 62-24411

Trans. of Radiotekhnika (USSR) 1956, v. 11, no. 4, p. 15-30 and 36-80.

DESCRIPTORS: *Triodes, *Tetrodes, *Pentodes, Oscillators, *Band-pass filters, Signal-to-noise ratio, *Electric power production, High frequency, *Radio communication systems, *Television, Video signals, Electron tubes, Acceleration, *Electronic equipment, Low frequency, Radiofrequency filters, Piezoelectric effect, Phase distortion, Textbooks, Literature.

Contents:
Methods of calculation and design of triode, tetrode and pentode oscillators, by M. S. Neiman
Noiseproof feature of a filter-equipped autocorrelation receiver of pulse signals, by V. I. Chaikovskii
New hybrid arrangements for composition and distribution of electric power at high frequencies, by A. A. Lvovich
A method for possible improvement of definition of television pictures, by V. F. Samoilov and V. M. Rodionov
Design of basic parameters of electron tubes used for measurements of accelerations, by L. A. Goncharskii

Low-frequency piezoelectric filter, by Ya. I. Velikin, Z. Ya. Gel'mont, and E. V. Zelyakh
Compensation method for lowering of nonlinear distortions, by A. A. Gorbachev
A more precise definition of one conclusion in the textbook literature, by A. P. Belousov
New books.

THIS WILL INTEREST YOU TOO! 3 June 60, 2p.
USASIA: SC-168/60; JPRS: R-711-D.
Order from OTS or SLA $1.10 60-31219

Trans. of das Elektron (Austria) 1958 [v. 11] no. 6, p. 120-121, 139 and 141.

DESCRIPTORS: *Electronics, *Electronic equipment.

News items on electronics from here and there (Russia, South Africa, England, USA) are reported.

Anders, Hans.
PREAMPLIFIERS FOR VIDICON CAMERAS USING DRIFT TRANSISTORS. [1960] 12p. 9 refs.
Order from SLA $1.60 62-14482

Trans. of Rundfunktech[nische] Mitt[eilungen] (West Germany) 1960, v. 4, no. 2, p. 66-73.
Another trans. is available from ATS $17.95 as ATS-33M44G [1960] 12p.

DESCRIPTORS: *Television cameras, Cameras, *Preamplifiers, Amplifiers, Circuits, Signal-to-noise ratio, Design, *Transistors, Drift, Temperature, Electron tubes.

Andryushchenko, V. A.
ELECTRETS AND PROSPECTS OF THEIR APPLICATION IN AUTOMATION: SURVEY. 7 Nov 60 [10]p. 13 refs. USASIA Trans. Log. no. 1093.
Order from OTS or SLA $1.10 62-24793

Trans. of #Avtomatika i Telemekhanika (USSR) 1960, v. 21 [no. 1, p. 139-142].

DESCRIPTORS: *Automation, *Electrets, Physical properties, Control system, Power supplies, Instrumentation.

Dekabrun, I. E., Kozlov, N. P. and Krasov, I. M.
DIE DYNAMIK EINES ELEKTROMAGNETISCHEN STEUERELEMENTES (Electromagnetic Control-element Dynamics). 7p. (text in German).
Order from T.I.B. $1.55

#Trans. of Avtomatika i Telemekhanika (USSR) 1960, v. 21, no. 4, p. 506-512.

DESCRIPTORS: *Automation, Servomechanisms, *Control systems, *Dynamics, Electromagnetism.

Ermeev, A. S.
AUSSICHTEN FÜR DIE ERHÖHUNG DER LEISTUNG VON HYDROGENERATOREN (Increase in Efficiency of Hydraulic Generators). 10p. (text in German).
Order from T.I.B. $1.55

Trans. of Vestnik Elektropromyshlennosti (USSR) 1959, [v. 30] no. 11, p. 4-8.
Another trans. is available in English from OTS $0.50 as 60-51135, 1961, 9p.

DESCRIPTORS: *Electric power production, Generators, Water coolers, *Hydraulic power systems

Fassbender, G.
PROBLEMS OF LIFE-SPAN AND VARIATIONS OF TRANSISTORS IN EAST GERMANY (Lebensdauer-fragen und Streuwerte bei Transistoren). 16 June 61 [24]p. JPRS: 9404.
Order from OTS or SLA $2.60 62-19176

Trans. of Nachrichtentechnik (East Germany) 1961, v. 11, no. 2, p. 66-71.

DESCRIPTORS: *Transistors, *Life expectancy, Low frequency, Quality control.

Frenklin, B. M.
ÜBER DIE KONSTRUKTIONEN VON HAUSHALTS-ELEKTROGERÄTEN (Construction and Industrial Production of Electrical Housekeeping-equipment). 5p. (text in German).
Order from T.I.B. $1.40

Trans. of Vestnik Elektropromyshlennosti (USSR) 1960, v. 31, no. 1, p. 13-15.

DESCRIPTORS: *Construction, *Installation, *Electrical equipment, *Housing, Industrial production.

Gindelis, Ya. E.
REDUCTIONS DE l'AUTODECHARGE DES BATTERIES NICKEL-CADMIUM (Reduction of the Self Unloading of Storage Nickle-cadmium). 18p. (foreign text included). 2 refs. F/R-2581. (text in French).
Order from OTS or ETC $1.85 62-28005

Trans. of Vestnik Elektropromyshlennosti (USSR) 1958 [v. 29] no. 8, p. 25-28.
Another trans. is available in English from OTS $0.50 as 59-11269 [1958] [8]p.

DESCRIPTORS: *Alkaline cells, *Reduction, Electrochemistry, *Electrodes, Storage batteries.

Gobrecht, Heinrich, Franke, Karl-Heins and others.
AN ALTERNATING CURRENT; APPARATUS FOR THE MEASURING OF THE HALL EFFECT AND OF THE CONDUCTIVITY OF LAYERS OF SEMICONDUCTORS WITH A HIGH OHMIC RESISTANCE. [1961] 26p. (11 figs. 10 refs. omitted). 2 refs.
Order from SLA $2.60 62-10761

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1961, v. 13, no. 6, p. 261-268.

DESCRIPTORS: *Alternating current, *Hall effect, *Measurement, Semiconductors, Conductivity, Voltage, Resistance, Electrical equipment.

The apparatus described permits the Hall voltages to be measured on samples having resistances between several hundred and about twenty thousand ohms. The smallest voltage which can be measured is 0.5 microvolts. The application of a phase-sensitive rectifier and an alternating reference voltage makes it possible to find the sign of the Hall voltage and the type of conductance (n type or p type). The apparatus also makes it possible to measure the resistances of the samples if they lie between about 100 and 20,000 ohms. (Author)

Kalinin, E. V.
ZUR STREUUNG DER DURCHSCHLAGSPANNUNGEN VON VENTIL-ÜBERSPANNUNGSABLEITERN FÜR BETRIEBSFREQUENZ (Breakdown Voltage Spread of Valve-lightning Arrestors for Industrial Frequency). 8p. (text in German).
Order from T.I.B. $1.55

Trans. of Vestnik Elektropromyshlennosti (USSR) 1960 [v. 31] no. 1, p. 33

DESCRIPTORS: *Voltage, Voltage regulators, *Lightning arrestors.

Kuiper, G.
A ROTATING AERIAL (Een Draaibare Antenne) tr. by Mrs. A. P. Lagerwerff. [1959] 3p. (2 illus. omitted). H-4108/A.
Order from OTS or SLA $1.10 59-19637

Trans. of Electron (Netherlands) 1956 [v. 11] p. 238.

DESCRIPTORS: *Antennas, Rotation, Design.

Kulik, Yu. A.
BERECHNUNGSMETHODE FÜR STRÖME VON DÄMPFUNGSWICKLUNGEN IN SYNCHRONMASCHINEN (Calculation Method for Currents of Damping Windings in Synchronous Generators). 18p. 4 refs. (text in German).
Order from OTS or ETC $1.85 62-26043

Trans. from Elektrichestvo (USSR) 1960, no. 9.

DESCRIPTORS: *Synchronous generators, *Damping, Electric currents, Theory.

Magondeaux, L. de and Magondeaux, E. de
THE PASSIVE RADAR RESPONDER (Repondeur Passif de Radar) tr. by E. Thiele. 1960, 15p. 4 refs. NRL Trans. 775.
Order from OTS or SLA $1.60 60-21427

Trans. of l'Onde Electrique (France) 1953, v. 33, no. 317/318, p. 530-539.

DESCRIPTORS: *Piezoelectric crystals, *Quartz crystals, *Quartz resonators, Radar pulses, Radar reflectors, Radar echo areas, Radar reflections.

The "passive responder" presented consists essentially of a resonator provided with a piezoelectric crystal (for example, quartz). Excited by an emission of pulses of a frequency corresponding to the fundamental or harmonic of the crystal, it retransmits between two pulses of the emitter, the energy stored by the crystal due to its very low rate of damping. (Author)

Malov, V. S.
REMOTE-CONTROL AND REMOTE-SIGNAL SYSTEMS [Sistemy Teleupravleniya i Telesignalizatsii]. 13 Feb 62 [25]p. 17 refs. FTD-TT-61-17; SC-950; AD-273 405.
Order from OTS or SLA $2.60 62-23683

Unedited rough draft trans. of mono. [Telemekhanika] Moscow/Leningrad, 1960, chap. 4, p. 66-88.

DESCRIPTORS: *Remote control systems, Command systems, Communication systems, Pulse generators, Trigger circuits, Control systems, Coding, Signals, Electric relays, Magnetic core switches.

Mantrov, V. M.
EIN SYSTEM ZUR SELBSTÄNDIGEN ZÜNDUNG UND ERREGUNG VON Hg-VENTILEN (Systems of Automatic Ignition and Induction of Mercury Valves). 7p. (text in German).
Order from T.I.B. $1.55

Trans. of Vestnik Elektropromyshlennosti (USSR) 1959, v. 30, no. 10, p. 67-69.

DESCRIPTORS: *Rectifiers, *Valves, *Mercury, Ignition.

Mitterer, R.
DETERMINATION OF FREQUENCY VARIATIONS WITH AN UNCERTAINTY OF 10^{-9} TO 10^{-13} BY DIGITAL PERIOD-DURATION MEASUREMENT OF A BEAT (Bestimmung von Frequenzschwankungen mit einer Unsicherheit von 10^{-9} bis 10^{-13} durch Digitale Periodendauer-Messung einer Schwebung) tr. by D. A. Sinclair. 1961, 16p. 5 refs. NRCC Technical Trans. 994.
Order from NRCC $1.00 NRCC C-3845

Trans. of Frequenz (Germany) 1960, v. 14, no. 5, p. 157-162.

DESCRIPTORS: *Quartz crystals, Crystals, *Crystal oscillators, *Frequency, Drift, Measurement, Voltage, Noise, Standards, Stability, Time interval counters.

Neuhof-Suski, L.
HUNGARIAN RESEARCH ON SINGLE AND MULTI-COMPONENT CRYSTALLINE CARBON RESISTORS (Az Egy- es Tobbkomponensu Kristalyos Szenretegellenallasok Kutatasa). 12 May 61 [50]p. JPRS: 9257.
Order from OTS or SLA $4.60 62-19236

Trans. of Magyar Tudomanyos Akademia Muszaki Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 26, no. 1/4, p. 269-295.

DESCRIPTORS: *Carbon resistors, Resistors, Production, Electrical properties, Physical properties, Chemical properties, Semiconductors, Hydrocarbons, Decomposition, Boron compounds, Carbides, Crystals, Electron diffraction analysis, *Hungary.

Paszek, Wladyslaw.
ON PROBLEMS AND CONCEPTS OF VOLTAGE REGULATION OF SYNCHRONOUS GENERATORS. 22 Nov 61 [31]p. JPRS: 11137.
Order from OTS or SLA $3.60 62-19485

Partial trans. (some parts summarized) of Archiwum Automatyki i Telemechaniki (Poland) 1961, v. 6, no. 1, p. 93-117.

DESCRIPTORS: *Generators, Voltage, *Voltage regulators, Control systems.

Prizeventsev, V. A.
ALUMINUM WINDING CONDUCTORS WITH ENAMEL AND FIBER INSULATION. Feb 62.
Order from MT £2 15s MT Trans-195

Trans. of Elektrichestvo (USSR) 1961, no. 4, p. 68-73.

DESCRIPTORS: *Conductors, *Wiring diagrams, *Aluminum, *Enamel coatings, Fibers, *Electric insulation.

Rezikyan, A. M., Agbalyan, Yu. G., and Madatyan, K. A.
A GAS-DISCHARGE STABILIZER. 7 Aug 61 [6]p. 2 refs. MCL-1063; AD-269 625.
Order from OTS or SLA $1.10 62-23359

Unedited rough draft trans. of Akademiya Nauk Armyanskoi SSR [Erevan]. Izvestiya. Seriya Fiziko-Matematicheskikh Nauk, 1960, v. 13, no. 4, p. 65-68.

DESCRIPTORS: *Gas discharges, Stabilization systems, Stabilization, Glow discharges, *Discharge tubes, Magnetic fields, Gas ionization, Measurement, Theory, Anodes, Electrodes, Direct current, Argon, Hydrogen, Rectifiers, USSR.

Experiments for determining the stabilization coefficient K_{st} were carried out on a device consisting of a gas-discharge tube, a field coil and a high-voltage variable rectifier. The stabilization coefficient was a function of the field and was maximum at a specific value. All the experiments were carried out twice: once with the gas-discharge tube filled with argon and the second time with hydrogen. The only difference was that in the case of hydrogen, stabilization began at a slightly higher voltage value. The nature of the curves was the same in both cases.

Saraga, W.
CONTRIBUTION OF THE SYNTHESIS OF REACTANCE TWO-TERMINALS AND FOUR-TERMINALS (Ein Beitrag zur Synthese von Reaktanz-Zweipolen und - Vierpolen) tr. by Claudius F. Mayer. [1960] [37]p. 22 refs. H 4627 C.
Order from OTS or SLA $3.60 60-17632

Trans. of [NTZ] Nachrichtentechnische Zeitschrift (West Germany) 1956, v. 9, no. 11, p. 519-532.

DESCRIPTORS: *Electrical networks, Synthesis, Functions.

Procedures of synthesis are developed which permit the values of the network elements to be obtained from the parameters of the selected network functions by means of explicit functions or of simple computing procedures.

Savelev, V. P. and Shmatovich, V. V.
ÜBERSPANNUNGSABLEITER FÜR 220, 330 UND 500 kV MIT MAGNETISCHER LICHTBOGENLÖSCHUNG ZUM SCHUTZ GEGEN ATMOSPHÄRISCHE ÜBERSPANNUNGEN (220, 330 and 500 kV-lightning Arrestors with Magnetic Arc Extinction as Atmospheric Overvoltage Protection). 9p. (text in German).
Order from T.I.B. $1.55

Trans. of Vestnik Elektropromyshlennosti (USSR) 1960 [v. 31] no. 1, p. 24-30.

DESCRIPTORS: *Lightning arrestors, *Atmospheric electricity, Voltage regulators.

Stukachev, A. V.
GRUNDPRINZIPIEN DER MODELLNACHBILDUNG VON MEHRBRÜCKEN-UMFORMERSCHALTUNGEN DER GLEICHSTROMÜBERTRAGUNG (Fundamental Principles of the Modelling of Multiplebridge Connections for DC-conversion). 10p. (text in German).
Order from T.I.B. $1.55

Trans. of Vestnik Elektropromyshlennosti (USSR) 1960, v. 31, no. 1, p. 18-21.

DESCRIPTORS: Test facilities, *Electric bridges, Model tests, *Frequency converters, *Direct current.

Suetin, T. A.
DAS IGNITRON IVS-100/2 (Ignitron IVS-100/2). 5p. (text in German).
Order from T.I.B. $1.40

Trans. of Vestnik Elektropromyshlennosti (USSR) 1959, v. 30, no. 11, p. 63-65.

DESCRIPTORS: *Igniters, Ignitron IVS-100/2.

Ustinskii, A. P.
AN INSTRUMENT FOR MAINTAINING CONSTANT ROTATION SPEED OF AN A-C GENERATOR. 3 Oct 61 [4]p. MCL-1227, pt. 1; AD-265 692.
Order from OTS or SLA $1.10 62-24037

Unedited rough draft trans. of #Byulleten' Izobretenii (USSR) 1960, no. 16, p. 23-24.

DESCRIPTORS: *Generators, Alternating current, Stabilization, Stabilization systems, Design, Servo systems.

A device is proposed for maintaining the constant rotation speed of an a-c generator, driven by an air turbine, and containing a mechanical differential and

an electromagnetic friction brake which operates on it. The braking force is regulated by the speed of the generator. The device differs from previous ones in that one of the axes of its differential is kinematically coupled with the system for controlling the feed of air to the turbine rotor, which, makes it possible to increase the efficiency. (Author)

Yarmol'chuk, G. G.
KONTAKTLOSES VERFAHREN ZUR BESTIMMUNG DES SPEZIFISCHEN ELEKTRISCHEN WIDERSTANDES (Contactless Determination of Specific Electrical Resistance). (text in German).
Order from T.I.B. $2.45

#Trans. of Avtomatika i Telemekhanika (USSR) 1958, v. 19, no. 3, p. 257-267.
Another trans. is available in english from OTS $0.50 as 59-11959 [1959] 16p.

DESCRIPTORS: *Electricity, *Resistance, Electric bridges, Automatic volume control.

Zelevinskii, G. S. and Nekrasov, A. M.
CERTAIN PROBLEMS IN FURTHER DEVELOPMENT OF THERMAL ELECTRIC POWER STATIONS AND POWER GRIDS. 2 Aug 61 [16]p. JPRS: 8677.
Order from OTS or SLA $1.60 62-23481

Trans. of excerpts from Elektricheskie Stantsii (USSR) 1961 [v. 32] no. 4, p. 2-9.

DESCRIPTORS: *Electric power production, *Thermoelectricity, *Power plants, Electrical equipment, Design, Construction.

Mechanical Engineering

Hübel, E.
WEAR AND TEAR OF PIPES ON THE FURNACE SIDE OF MELTING POTS. [1959] 31p. (14 figs. omitted).
Order from OTS or SLA $3.60 59-18547

Trans. of Vereinigung der Grosskesselbesitzer. Mitteilungen (West Germany) 1957, no. 51, p. 421-430.

DESCRIPTORS: *Power plants, Mines, *Boilers, *Cyclone furnaces, *Pipes. Deterioration, Erosion, Corrosion, Fuel comsumption, Coal, Corrosion inhibition, Fuels, Design.

The report gives the experience gained in the power plant of the Fürst Leopold-Bauldur pit as well as reflections thereon by the management in order to avoid the damages inflicted. This is followed by ideas about fuels suitable for the operation of melting pots with difficult coals. The Fürst Leopold-Bauldur boiler plant appears to be especially suitable to discuss the present problem because of the different furnaces used. (Author)

Ibing, R.
FLOW OF SMOKE FROM STACKS OVER LEVEL TERRAIN, tr. by Bertha P. Klenova. 22 Nov 55, 13p. 3 refs. [TVA no.] 3498.
Order from OTS or SLA $1.60 60-23458

Trans. of Ver[ein] Deut[scher] Ing[enieure]. Z[eitschrift] (West Germany) 1954, v. 96, p. 1085-1090.

DESCRIPTORS: *Power plants, Design, *Smokes, Motion, Gas flow, Meteorology, Wind, Wind tunnel models, Model tests.

In steam power plants the formation of smoke plumes--aside from topographic conditions--depends upon the direction of the wind, the height of the stack, and the ratio of the emergent velocity of the smoke to the velocity of the wind. According to available incomplete data, which were gathered in an extensive experimental program in a standard plant, some guiding principles can be derived for the position and shape of stacks in the design of new power plants which should operate with as little damage from smoke as possible. Improvements in existing power works are not always possible through increase of the height of the smoke stacks, increase in the rate of smoke emergence, or by providing dispersal plates at the top of the stack, especially when the topographic conditions are unfavorable. (Author)

Ordnance, Missiles, and Satellite Vehicles

DETAILS OF THE SOVIET VENUS PROBE: [SELECTED ARTICLES] tr. by J. W. T. Palmer. 4 Apr 61 [21]p. RAE Library Press Trans. no. 10; [DSIR] NLL M. 3248.
Order from OTS or SLA $2.60 62-23575

Trans. from Pravda [Moscow] (USSR) 1961, 16 Feb and 3 Mar.

DESCRIPTORS: *Venus, *Space probes, Satellite vehicles, Spaceships, Space flight, Orbital flight paths.

Contents:
The first flight to Venus; the movement of the automatic interplanetary station
The automatic interplanetary station is continuing its flight to the planet Venus, Tass rept.

THE FIFTH SOVIET SPACE-SHIP SATELLITE IS PREPARING THE WAY FOR A MAN IN SPACE: TASS REPORT, tr. by J. W. T. Palmer. 29 Mar 61 [2]p. RAE Library Press Trans. no. 12; [DSIR] NLL M. 3247.
Order from OTS or SLA $1.10 62-23573

Trans. from Pravda [Moscow] (USSR) 1961, 26 Mar.

DESCRIPTORS: *Spaceships, Space flight, *Satellite vehicles, Orbital flight paths.

THE FOURTH SOVIET SPACE-SHIP SATELLITE: [SELECTED ARTICLES] tr. by J. W. T. Palmer. 24 Mar 61 [4]p. RAE Library Press Trans. no. 11; [DSIR] NLL M.3246.
Order from OTS or SLA $1.10 62-23574

Trans. from Pravda [Moscow] (USSR) 1961, 10 Mar and 12 Mar.

DESCRIPTORS: *Spaceships, Space flight, *Satellite vehicles, Launching, Orbital flight paths.

Contents:
A Soviet space-ship satellite has successfully completed a flight
The launching of the fourth space-ship satellite in the Soviet Union, a Tass rept.
Pravda interview, Earth - Space - Earth.

FUTURE WAR STRATEGY AND ASTRONAUTICS WILL BE AFFECTED BY THE NAUTILUS' CROSSING UNDER THE POLE, tr. by Jane Alexander. 4 Sep 58, 5p. Trans. no. 342.
Order from OTS or SLA $1.10 59-14633

Trans. from Corriere d'Informazione (Italy) 1958, 11/12 Aug, p. 1 and Il Messaggero [di Roma](Italy) 1958, 11 Aug, p. 1 (similar text, headlines only differ).

DESCRIPTORS: *Submarines, Nuclear propulsion, Propulsion, *Astronautics, *Warfare, Naval vessels, Naval operations.

Pacner, Karel.
CZECHOSLOVAK REPORT ON ROCKET RESEARCH IN NATIONS OTHER THAN US AND USSR (O Raketovem Vyzkumu v Zemich, Jez Nepatri ke Kosmickym Velmocem). 2 Mar 62 [11]p. JPRS: 12764.
Order from OTS or SLA $1.60 62-23330

Trans. of Mlada Fronta (Czechoslovakia) 1961, v. 17, no. 278, p. 6, no. 284, p. 6.

DESCRIPTORS: *Rocket research, Satellite vehicles, Astronautics, Europe.

Rougeron, Camille.
TOWARD THE 400-TON BALLISTIC MISSILE (Vers l'Engin Balistique de 400 Tonnes) tr. by W. E. C. [1959] [10]p. (3 figs. omitted). H-3551 B.
Order from OTS or SLA $1.10 59-21079

Trans. of l'Air (France) 1959 [v. 40] no. 744, p. 17-20.

DESCRIPTORS: *Guided missiles, Surface-to-surface, Guidance, Rocket motors, Rocket propulsion.

Shevelyuk, M. I.
THEORETICAL BASES FOR THE DESIGN OF LIQUID-FUELED ROCKET ENGINES. 7 Mar 62 [961]p. 52 refs. MCL-1358; AD-273 887.
Order from OTS or SLA $36.00 62-24034

Trans. of mono. Teoreticheskie Osnovy Proektirovaniya Zhidkostnykh Raketnykh Dvigatelei, Moscow, 1960, 684p.

DESCRIPTORS: *Rocket motors, *Liquid rocket propellants, Rocket fuels, Rocket propellants, Combustion chambers, Exhaust nozzles, Cooling, Fuel systems, Control systems, Design, Theory, Operation, Pressure, Heat transfer, Thrust, Combustion, Gas flow, Combustion chamber gases, Mathematical analysis, Reliability, Rocket motor nozzles, Exhaust gases, Rocket oxidizers, Thermodynamics, Propellant properties, Gas turbines, Gas generating systems, Fuel injectors, Fuel nozzles, Fuel sprays, Instruction manuals.
This volume sets forth the theoretical foundations of the design of liquid-fueled rocket engines (LFRE); using data published in the foreign literature as a basis, it discusses the operating modes, working processes, and characteristics of the LFRE and its chamber, the planning and design of atomizing devices and systems for delivering fuel into the chamber of the LFRE, as well as the specifications of the fuels used. The book also illuminates the problems of chamber cooling and operation and testing of LFRE. The volume is designed as a study aid for the higher technical schools in the corresponding specialties: it can also be used as a textbook for engineers and technicians working in this field. (Soviet publisher's note)

Zutic, Stevan.
SOME ELEMENTS OF USING ABC WEAPONS AND PROTECTION AGAINST ABC ON THE SEA (Neki Elementi Upotrebe ABH Borbenih Sredstava i ABH Obezbedenja na Moru). 7 Aug 61 [29]p. JPRS: 9766.
Order from OTS or SLA $2.60 62-19583

Trans. of Mornaricki Glasnik (Yugoslavia) 1960 [v. 10] no. 5, p. 541-563.

DESCRIPTORS: Weapons, *Nuclear weapons, Atomic bomb explosions, Explosions, Underwater explosions, Shock waves, Radioactivity, Thermal radiation, Warfare, *Biological warfare, *Chemical warfare, Amphibious operations, Antisubmarine defense systems, *Naval operations.

Sanitation and Safety Engineering

NATIONAL CHIEF DIRECTORATE OF WATER CONSERVATION, CONCERNING THE ORGANIZATION OF PRODUCTION SECTIONS WITHIN THE WATER CONSERVATION DIRECTORATES: DIRECTIVE NO. 24/1961. 12 Dec 61 [6]p. JPRS: 11462.
Order from OTS or SLA $1.10 62-19546

Trans. of Vizugyi Ertesito (Hungary) 1961, v. 8, no. 11/12, p. 96.

DESCRIPTORS: *Water supplies, Water, Consumption, Sanitary engineering, Engineering, Hydraulic research, Hydraulic systems, Construction, Management engineering, *Hungary.

WORK SAFETY IN INDUSTRY, 1961, NO. 12: SELECTED ARTICLES. 7 Mar 62 [20]p. JPRS:12893.
Order from OTS or SLA $1.60 62-23342

Trans. of Bezopasnost' Truda v Promyshlennosti (USSR) 1961 [v. 5] no. 12, p. 1-2, 18-19, 36, 38-39.

DESCRIPTORS: *Industry, *Safety, Conferences, Radioactive isotopes, Coal, Ores, *Mining engineering, Explosives, Rumania, Acetylenes, Production, Natural gas, *Chemical engineering, *Chemical industry.

Contents:
All-Union Conference on the use of radioactive isotopes in the coal and ore mining industries, by G. I. Kapelyushnikov
Safety explosives used in coal mines in Rumania
Safety problems in the production of acetylene from natural gas, by I. S. Rosen
Safety problems in planning chemical plants, by B. L. Kaner.

Friedrich, M. and Hinrichs, B. R.
BEHAVIOR OF PVC AND POLYETHYLENE PIPES DURING FIRES IN BUILDINGS (Verhalten von Rohrleitungen aus PVC und Polyäthylen bei Bränden). [1962] [27]p. 13 refs.
Order from SLA $2.60 62-14292

Trans. of Kunststoffe (West Germany) 1961, v. 51, no. 3, p. 126-132.

DESCRIPTORS: *Buildings, *Fires, *Plastic pipes, Pipes, Heat tolerance, Flames, Tests, Plastics, Ethylenes, Polymers, Vinyl chlorides.

In order to determine the heat-and flame-resistance of PVC and polyethylene pipes, laboratory tests were carried out to study the effect of a definite infrared radiator and, in a large-scale test in a two-story dwelling house, the effect of burning gasoline was investigated. The plastic pipes above the plaster layer were damaged and partially burnt, but a thin plaster coating was sufficient to reduce destruction under extreme experimental conditions. No fire-spread through walls and ceilings was found. (Author)

Kostrikin, Yu. M., Goffman, I. N., and Ivanova, V. A.
THE DEIORNIZATION (DEIONIZING) OF WATER BY CELLULOSE. 13 Sep 61 [16]p. 8 refs. MCL-1056; AD-264 625.
Order from OTS or SLA $1.60 62-23357

Unedited rough draft trans. of Teploenergetika (USSR) 1960 [v. 7] no. 3, p. 13-17.
Another trans. is available from OTS or SLA $1.60 as 61-19794; RTS-1666, Apr 61 [13]p.

DESCRIPTORS: *Feed water, Water, Purification, *Iron compounds, Ions, Separation, *Cellulose, *Water filters, Effectiveness, Economics.

For abstract see Technical Translations 6: 112, 1961.

Makirov, K. A. and Karakulov, I. K.
THE PRESENT STATUS AND FUTURE PROSPECTS FOR THE CONTROL OF INFECTIOUS DISEASES IN KAZAKHSTAN (Sostoyanie i Perspektivy Bor'by s Infektsionnymi Zabolevaniyami v Kazakhstane). 3 Oct 61 18p. Trans. V-1735.
Order from OTS or SLA $1.60 62-13478

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1961 [v. 32] no. 7, p. 12-19.

DESCRIPTORS: *Infections, *Diseases, Control, Preventive medicine, Sanitary engineering, Medical research.

Moiseitsev, P. I.
NEW SANITARY REGULATIONS OF WORK WITH RADIOACTIVE SUBSTANCES AND SOURCES OF IONIZING RADIATIONS NO. 333-60 AND "REGULATIONS OF TRANSPORTATION OF RADIOACTIVE SUBSTANCES" NO. 349-60. 6 Mar 62 [14]p. 6 refs JPRS: 12823.
Order from OTS or SLA $1.60 62-19804

Trans. of Gigiena i Sanitariya (USSR) 1961 [v. 26] no. 10, p. 50-57.

DESCRIPTORS: *Radioactive isotopes, *Labeled substances, Handling, Transportation, Safety, Public health, Radiological contamination, Toxicity, Gamma rays, Ionization, Sources, Nuclear engineering, Engineering.

Ship Building

ACTIVITIES OF THE SCIENTIFIC AND TECHNICAL SOCIETY OF THE SHIPBUILDING INDUSTRY (Devyataya Nauchno-Tekhnicheskaya Konferensiya po Stroitel'noi). 7 Nov 60 [7]p. JPRS: 4164.
Order from OTS or SLA $1.10 62-23489

Trans. of Sudostroenie (USSR) 1960 [v. 26, no. 8] p. 74.

DESCRIPTORS: *Ships, Construction, Structures, Theory, *Marine engineering.

TECHNICAL DATA AND DESCRIPTION OF THE RUSSIAN EXPEDITION SHIPS PARTICIPATING IN THE INTERNATIONAL GEOPHYSICAL YEAR PROGRAM: POLYARNIK, OKEANOGRAF, PROFESSOR RUDOVITS, ZHEMCHUG, PERVENETS, VITIAZ, VAVILOV, ETC, tr. by M. Slessers. 1961 [46]p. HO Trans-136.
Order from OTS or SLA $4.60 62-13482

Trans. of unidentified mono., pub. by USSR World Data Center Institute of Aeroclimatology, 26 Jan 61.

DESCRIPTORS: *Geophysics, *Oceanography, Meteorology, Hydrodynamics, *Ships, Design, Electrical equipment, Acoustics, Echo ranging, Navigation, Instrumentation, Hydrographic surveying.

Bollmann, Fr. W. and Waas, H.
EXPERIENCES WITH THE BUOY LAYER "NORDEN" AND THEIR APPLICATION IN THE NEW VESSEL "BARSEMEISTER BREHME". May 60 [27]p. Bureau of Ships Trans. no. 708
Order from OTS or SLA $2.60 60-17784

Trans. of special reprint of Hansa (West Germany) 1959, v. 96, no. 33/34, p. 1749-1761.

DESCRIPTORS: *Buoys, *Ships, Design, Construction, Navigation.

Buller, K.
THE HYDROFOIL BOAT (Das Tragflügelboat) tr. by E. N. Labouvie. Dec 59 [9]p. Trans. 293.
Order from OTS or SLA $1.10 60-13271

Trans. of Hansa (West Germany) 1952, no. 33/34, p. 1090.

DESCRIPTORS: *Hydrofoil boats, Design, Tests, Traffic, Transportation, Stability.

This report gives a short summary of the development of the hydrofoil boat during the past 50 years. The limitations of size, the power required, and the stability of these high-speed boats are discussed. (David Taylor Model Basin abstract)

FOOD, HANDLING, AND PACKAGING EQUIPMENT

Food

Dubrova, G. B.
USE OF ANTIBIOTICS FOR THE PRESERVATION OF FOOD PRODUCTS: CONCLUDING REMARKS. 2Mar 62, 3p. 3 refs. JPRS: 12828.
Order from OTS $0.50 62-11233

Trans. of mono. Primenenie Antibiotikov dlya Sokhraneniya Pishchevykh Produktov, Moscow. 1961, p. 82-84.

DESCRIPTORS: *Food, Preservation, *Antibiotics.

Lefaux, R.
PLASTIC PACKAGING FOR FOODS. [1962] 10p.
Order from ATS $14.60 ATS-57P60F

Trans. of Emballages (France) 1960, no. 200, p. 163-169.

DESCRIPTORS: *Food, *Packaging, *Plastics.

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

Chernyi, G. V.
AUTOMAT ZUR HERSTELLUNG VON BOHRUNGS-KERNEN (Automatic Machine for the Manufacturing of Bore Hearts). 7p. (text in German).
Order from OTS or ETC $1.55 62-26007

Trans. of Liteinoe Proizvodstvo (USSR) 1960, no. 11, p. 36-37.

DESCRIPTORS: *Drilling machines, Automation.

Karazik, A. A.
NEUE MASCHINE ZUR MECHANISIERUNG DER FANGPROZESSE AUF MITTLEREN FISCHFANG-TRAWLERN DER TREIBNETZFISCHEREI (New Machine to Mechanize the Catching Process on Average Fishing Trawlers of the Drift-net Fishery). 8p. MTWL: 1089 (text in German).
Order from OTS or ETC $1.55 62-26040

Trans. of Rybnoe Khozyaĭstvo (USSR) 1958, v. 34, no. 7, p. 28-31.

DESCRIPTORS: *Fishes, *Ships, *Mechanical drives, Nets.

Malikov, F. P.
INNOVATIONS IN MACHINE-BUILDING TECHNOLOGY, CHAPS. II-III. 27 Mar 62 [52]p. (23 figs. omitted). FTD-TT-61-332.
Order from OTS or SLA $5.60 62-24468

Unedited rough draft trans. of mono. Novoe v Tekhnologii Mashinostroeniya, Chelyabinsk, 1958, p. 17-50 and 83-92.

DESCRIPTORS: *Machines, Construction, *Electric machinery, *Machining, Metals, Alloys, *Ultrasonics, *Machine tools, Manufacturing methods

Contents:
Electrical machining methods for metals and hard alloys
Combined ultrasonic and electrochemical machining.

Pahlitsch, G. and Windisch, H.
SOME WAYS OF ECONOMICAL BELT POLISHING. [1961] 7p. (7 figs. 11 footnotes refs. omitted).
Order from SLA $1.10 62-14055

Condensed trans. of Metall (West Germany) 1955, v. 9, no. 1/2, p. 27-33.

DESCRIPTORS: *Belts, Grinders, Abrasives, Costs, Manufacturing methods.

Shabanov, A. A., and Ivashov, V. P.
NETZSCHUTTELMASCHINE WZM-2 (SETETRASNAYA MASHINA VSM-2) (Net Moving Machine) 6p. MTWL: 1073 (text in German).
Order from OTS or ETC $1.55 62-26024

Trans. of Rybnoe Khozyaĭstvo (USSR) 1958, v. 7, p. 32-34.
Another trans. is available in English from OTS or SLA $1.10 as 61-19943, RTS-1833, May 61 [5]p.

DESCRIPTORS: *Fishes, *Nets, Ships, Mechanical drives.

Sil'vestrov, V. D.
SCIENTIFIC-TECHNICAL CONFERENCE ON LUBRICATING AND COOLING AGENTS FOR METAL CUTTING. 19 Dec 60 [4]p. JPRS; 6433.
Order from OTS or SLA $1.10 62-23485

Trans. of #Stanki i Instrument (USSR) 1960 [v. 31] no. 5, p. 42.

DESCRIPTORS: *Metals, *Cutting tools, Cooling, Lubrication, Oils, Conferences, Industrial research, Scientific research, Lathes, Machine tools.

Vysotskii, D. P.
THE V-95A VIBROHAMMER. [1962] 4p.
Order from ATS $3.40 ATS-43P60R

Trans. of Razvedka i Okhrana Nedr (USSR) 1961, v. 27, no. 9, p. 48-50.

DESCRIPTORS: Vibration, *Hammers, Design.

Engines and Propulsion Systems

TOWARD THE ATOMIC AIRPLANE. [1960] 4p.
Order from OTS or SLA $1.10 60-17438

Trans. of Muszaki Elet (Hungary) 1957 [v. 12] no. 24, p. 13.

DESCRIPTORS: *Airplanes, Propulsion, *Nuclear propulsion.

TURBOJET ENGINE BUILT IN EAST GERMANY. 12 Mar 59 [4]p. (1 fig. omitted) AF 1 255 628.
Order from OTS or SLA $1.10 59-16310

Summary trans. of extracts from Flügel der Heimat (West Germany) 1958, no. 4, p. 6; no. 10, p. 26 and no. 10, p. 29.

DESCRIPTORS: Engines, *Turbojet engines, Design, Construction, *East Germany.

Chizhov, V. G.
DESIGN OF DIES FOR COMPRESSOR BLADES. Feb 62.
Order from MT £4 5s MT Trans-212

Trans. of Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1960, v. 2, no. 8, p. 19-21.

DESCRIPTORS: *Compressor blades, *Dies, Design.

Den, G. N.
EINFLUSS DER RELATIVEN BREITE DES STRÖMUNGSKANALS (LAUFRAD UND DIFFUSOR) AUF DIE ARBEIT EINER ZENTRIFUGALSTUFE MIT SCHAUFELLOSEM DIFFUSOR (Influence of the Relative Breadth of the Flow Canal, (Rotor Disk and Diffuser) on the Work of a Centrifugal Step with Scoopless Diffuser). 13p. 6 refs. (text in German).
Order from OTS or ETC $1.85 62-26008

Trans. of Energomashinostroenie (USSR) 1960, v. 6, no. 11, p. 20-23.

DESCRIPTORS: *Diffusers, Air scoops, Rotor blades, Fluid flow, *Centrifugal compressors.

Tokar', I. Ya., Revenko, V. V. and others.
DIE EXPERIMENTELLE UNTERSUCHUNG DES STRÖMUNGSWIDERSTANDES UND DES WÄRMEÜBERGANGES IN EINEM WICKLUNGSSTAB EINES TURBOGENERATORS MIT LEITERKÜHLUNG (Experimental Tests of Resistance to Heat Flow and Transfer in the Stator of a Turbo-generator with Conductor-cooling). 9p. (text in German).
Order from T.I.B. $1.55

Trans. of Vestnik Elektropromyshlennosti (USSR) 1959, v. 30, no. 11, p. 9-12.

DESCRIPTORS: *Gas turbines, *Turbine stators, Hydraulic systems, Heat transfer, Tests, *Generator.

Manufacturing Equipment and Processes

PROBLEMS IN CASTING PRODUCTION TECHNOLOGY: SELECTED ARTICLES (Voprosy Tekhnologii Liteinogo Proizvodstva). 28 Feb 62 [84]p.
FTD-TT-61-219; AD-273 409.
Order from OTS or SLA $8.10 62-23681

Unedited rough draft trans. of [Aviatsionnyi Tekhnologicheskii Institut] Moscow. Trudy (USSR) 1961, v. 49, p. 5-46.
##An abstract trans. of p. 24-46 is available from OTS or SLA $1.10 as 61-28471, AID-61-114, 1 Aug 61, 2p.

DESCRIPTORS: Industrial production, Manufacturing methods, Metals, Crystallization, *Casting.

Contents:
Casting of large-size thin-walled parts by the directional stage crystallization method, by V. D. Khramov and E. V. Mishakov
##Pressure casting and its hydrodynamic foundations, by V. Ya. Tarutin and E. S. Stebakov.

Chvertko, A. I.
FLUX EQUIPMENT FOR AUTOMATIC AND SEMI-AUTOMATIC WELDING. 24 Aug 61 [303]p. 103 refs.
MCL-924; AD 269 616; NP-tr-758.
Order from OTS or SLA $19.75 62-24478

Unedited rough draft trans. of mono. Flyusovaya Apparatura dlya Avtomaticheskoi Polyavtomaticheskoi Svarki, Moscow, 1960, 153p.

DESCRIPTORS: *Welding fluxes, *Industrial equipment, Automatic, *Welding, Preparation, Processing, Physical properties, Mechanical properties, Test methods, Specifications, Mathematical analysis, Manufacturing methods, Transportation, Conveyors, Hydraulic pressures, Theory, *USSR.

Increasing productivity, improving quality, and lowering labor consumption and the cost of welding work may be attained by increasing welding speeds or the

quantity of metal welded-on in a unit of time; and by shortening auxiliary time spent on the supplying and cleaning off of flux, by decreasing flux consumption through the dosing of its portion, and by repeated use of the portion of flux which remains unfused after welding. The cost of flux amounts to 40 to 50% of the total cost of the unit of seam length. The raising of welding efficiency depends to a considerably extent upon the introduction into industry of a mechanized method of flux transportation from its removal from the seam up to its subsequent return to the welding zone. The mechanized method is based mainly upon the use of special flux equipment in which air is applied for moving the flux. This book is the first attempt at a total exposition of the problems in question and at showing the accomplishments of recent years in creating and exploiting flux equipment.

Gladkich, A. N. and Maslennikov, N. I.
BERECHNUNG VON VERFAHRENSTECHNISCHEN STUFEN UND WERKZEUGBEMESSUNG ZUR AUTOMATISIERTEN FLIESSFERTIGUNG VON KOPFSCHRAUBEN (Calculation of Processing Steps and Tooling Calculation for Automatic Flow Production of Cap Screws). 13p. (text in German).
Order from OTS or ETC $1.85 62-26002

Trans. of Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1960, v. 2, no. 10, p. 21-24.
Another trans. is available in English from BISI £3 as BISI-2454, Oct 61.

DESCRIPTORS: *Metal screws, *Production, *Automation, Processing, Tools.

Inoue, Kiyoshi
INFORMATION ON CASE-HARDENING IN THE SOVIET UNION. 5 Jan 59, 68p. (49 figs. omitted) 1 ref. JPRS L-1360-D.
Order from OTS or SLA $6.60 59-11368

Trans. of Kikai to Kogu (Japan) 1958, Apr, p. 59-66; May (?); June, p. 14-16; Aug, p. 43-48; Sep, p. 49-52.

DESCRIPTORS: Surfaces, *Hardening, *Electric arcs, *Electrodes, *Electric discharges, *Spark machining, Corrosion, Thickness, Heat tolerance, Heat treatment, Nitrogen, Metallurgical analysis, X-rays, Cutting tools, Turbines, Machines, Drills, Vehicle wheels, Wrenches.

Sokolov, G. V.
THE MODERN TYPE OF TWISTING MACHINE, tr. by I. Gawronska. 16 May 61 [12]p. Courtaulds Misc. Lit. 3306; NLL M. 3351.
Order from OTS or SLA $1.60 62-23939

Trans. of Tekstil'[naya] Prom[yshlennost'] (USSR) 1960, v. 20, no. 3, p. 36-42.

DESCRIPTORS: *Textiles, *Machines, Industrial equipment, Manufacturing methods.

Transport, Traction and Hoist Facilities

FOR RESEARCH: THE REGIE RENAULT WORKS ON AN AMERICAN SCALE (Pour la Recherche, la Régie Renault Travaille a l'Échelle des Américains) tr. by A. D. S. [1959] [5]p. (2 illus. omitted). H-2687B.
Order from OTS or SLA $1.10 59-11908

Trans. of Entreprise (France) 1958 [no. 101] p. 38-39.

DESCRIPTORS: *Automotive industry, Industry, Research program administration, France.

THE SAVIEM: AN ENTRY IN FORCE ON THE MARKET OF THE HEAVYWEIGHTS (La Saviem: une Entrée en Force sur le Marché des Poids Lourds) tr. by A. D S. [1959] [6]p. (4 illus. omitted). H-2687A.
Order from OTS or SLA $1.10 59-11907

Trans. of Entreprise (France) 1958 [no. 161] p. 14-21.

DESCRIPTORS: *Automotive industry, Industry, Industrial production, France.

Crepet, M. A.
SOME TYPES OF INSTALLATION AND EQUIPMENT: PANTAGRAPH DIMENSIONS AND WIRE SPAN (Pantograph Gabarit et Portees) tr by A. D. S. [1960] [7]p. (6 figs. omitted). H-4024.
Order from OTS or SLA $1.10 60-21027

Trans. of Revue Générale des Chemins de Fer (France) 1955, July, p. 504-507.

DESCRIPTORS: *Railroad tracks, Installation, Wire, Tracked vehicles, Railroad cars, France.

Grafov, I. F.
CEMENT HAULING TRUCKS WITH LOAD LIFTING CAPACITY OF 7-12 TONS. 26 Mar 62 [5]p. FTD-TT-62-153.
Order from OTS or SLA $1.10 62-24275

Unedited rough draft trans. of Mekhanizatsiya Stroitel'stva (USSR) 1961 [v. 18, no. 3] p. 20-21.

DESCRIPTORS: *Cements, Transportation, *Cargo vehicles, *Tractors, *Load distribution, Design, Construction.

Praga, P. M.
SIX-AXLE RAILROAD TANK CAR OF 90-TON LOAD CAPACITY. 12 Mar 62 [5]p. FTD-TT-62-215; SC-1048; ASTAR 2747.
Order from OTS or SLA $1.10 62-24284

Unedited rough draft trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1961, no. 12, p. 75-77.

DESCRIPTORS: Railroads, *Railroad cars, Transportation, Load distribution, Design.

Sirkovic, Radomir.
PROSPECTS FOR THE DEVELOPMENT OF OUR MOTORIZATION AND TRANSPORTATION (Perspektive Razvoja Nase Motoizacije i Saobracaja) tr. by E. H. [1959] [24]p. H-4514.
Order from OTS or SLA $2.60 59-19905

Trans. from Tehnika (Yugoslavia) 1958 [v. 2] no. 10

DESCRIPTORS: *Vehicles, Passenger vehicles, Cargo vehicles, *Motorcycles, Production, Transportation, *Fuels, Consumption.

IMPROVEMENT OF THERMOMECHANICAL TESTING OF POLYMERS THROUGH AROMATIC RECORDING. 22 June 61, 5p. 15 refs. AID Rept. 61-96; AD-260 422.
Order from OTS or SLA $1.10 61-27307

DESCRIPTORS: *Heat resistant polymers, Polymers, *Plastics, *Deformation, Temperature, Pressure, Mechanical properties, Heating, Tests, Test equipment, Test methods, Automation, USSR, Analysis.

The method of thermomechanical curves, used extensively in the USSR for determining mechanical properties of polymers at varying temperatures, is discussed. A fully automatic laboratory device has been constructed for recording the values of monoaxial compression of a polymer at gradually increased temperatures, while the polymer changes state from the glassy (or vitreous) to the highly elastic, and finally to the viscous-plastic. The points on the generally S-shaped thermomechanical curve representing these changes of state are the glass-transition point Tg and flow point Tf. In the new device monoaxial compression is produced by the pressure of an interchangeable load on the specimens while they are being subjected to temperature variations in the -120 to 400 C range. The dimensional changes are converted into electric signals and recorded continuously. (ASTIA abstract)

Edel'man, L. I., Sominskiĭ, D. S., and Kopchikova, N. V.
ETUDE DE LA DISTRIBUTION DES PORES D'APRES LEURS DIMENSIONS DANS LE CIMENT DURCI (Pore-dimension Distribution in Cement Stone). 18p. (foreign text included) 6 refs. F/R-2563. (text in French).
Order from OTS or ETC $1.85 62-28000

Trans. of Kolloidnyĭ Zhurnal (USSR) 1961, v. 23, no. 2, p. 228-233.

DESCRIPTORS: *Cements, *Concrete, Porous materials, Distribution.

Kollerov, D. K.
DIE VERTEILUNG DER GASSTRÖMUNG IN EINER SCHÜTTGUTSCHICHT (Distribution of Gas Flow in a Bulk Material Layer). 13p. (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1957 [v. 2] no. 7, p. 23-28.

DESCRIPTORS: *Gas flow, *Ovens, *Materials, Grains, Generators.

Luginina, I. G.
DER EINFLUSS VON MINERALISATOREN AUF DIE KLINKERBILDUNG BEI SCHNELLEM BRENNVORGANG (Influence of Mineralizers upon the Clinker Formation at Fast Burning). 6p. (text in German).
Order from T.I.B. $1.55

Trans. of Tsement (USSR) 1961, v. 27, no. 4, p. 20-22.

DESCRIPTORS: *Cements, *Heating, Physical properties.

Marschall, H. J.
MAGNETIC PARTICLE INSPECTION AND THE MOST RECENT METHODS OF INDICATION. [1962] [10]p.
Order from SLA $1.10 62-14657

Trans. of Werkstatt und Betrieb (West Germany) 1958, v. 91, no. 11, p. 649-653.
Another trans. is available from BISI £4 10s as BISI-1567 [1960].

DESCRIPTORS: *Particles, Magnetic properties, Non-destructive testing, Materials, Test methods.

For abstract see Technical Translations 3: 590, 1960.

Pesin, L. M., Maizel, M. G. and others.
POLYAMIDE AND RUBBER MATERIALS, tr. by R. Moseley. 1960 [3]p. 5 refs. RABRM Trans. 792; NLL M.1837.
Order from OTS or SLA $1.10 61-13161

Trans. of Plasticheskie Massy (USSR) 1959, no. 2, p. 25-29 (reprinted from Rubber Journal and International Plastics (Gt. Brit.) 1960, 19 Mar.).

DESCRIPTORS: *Plastics, *Polymers, *Amides, *Rubber, Materials, Preparation, Physical properties, Laminates.

The advantages of building up materials with a laminated arrangement of polyamide film and a covering of chloroprene rubber are demonstrated. The construction of single-layer and two-layer materials of polyamide film and polychloroprene rubber is worked out. Procedure is worked out for the building up of single layer and multilayer parallel and transversely plied-up materials. The authors investigate test specimens and demonstrate that the combination of rubbers with plastics makes it possible to enhance a number of properties of the plastics and to form materials with improved service properties. (Author)

Sytsev, M. M.
SINTERBARKEIT VON ROHMISCHUNGEN VERSCHIEDENER ZUSAMMENSETZUNG (Fusibility of Raw Mixtures of Different Composition). 9p. (text in German).
Order from T.I.B. $1.55

Trans. of Tsement (USSR) 1961, v. 27, no. 4, p. 22-25.

DESCRIPTORS: *Cements, Sinters, *Fused materials, Temperature, Physical properties.

Takemoto, K., Kataoka, M., and Suzuki, S.
UTILISATION OF BY-PRODUCT GYPSUM FOR PORTLAND CEMENT. 25p. 4 refs.
Order from OTS or ETC $2.37 62-26044

Trans. of Sekkō to Sekkai (Japan) 1958, v. 1, p. 1621-1636.

DESCRIPTORS: *Cements, *Gypsum, Chemical impurities, *Hardening, Phosphoric acid, Fluorine.

Wentzel, H.
CONDUCTING ADHESIVES. [1962] [9]p. (11 figs. 2 tables omitted) 8 refs.
Order from SLA $1.10 62-14665

Trans. of Elektrie (Germany) 1961 [v. 15] no. 2, p. 12-15.

DESCRIPTORS: *Adhesives, *Resin adhesives, Metal powders, *Conductivity, Preparation, Electrical engineering.

The experiments, which were carried out with various cold adhesives and various metal powders on strips of aluminum sheeting with a 2 cm^2 adhesive surface, have demonstrated that conducting adhesives can be prepared most advantageously by addition of at least 20 parts of a fine nickel powder to 100 parts of EGK 19 or polyester resin. The transition resistance amounts to about 10 mΩ/cm^2, the compression pressure should amount to at least 0.5 kp/cm^2. The shearing strength of EGK 19 was raised by a metal powder content of about 20%. The use of conducting adhesive resins is unconditionally recommended. (Author)

Ceramics and Refractories

Günther, Rudolf.
EFFECT OF MIXTURE PREPARATION AND CHARGING ON HOMOGENEITY (Einfluss der Gemengebereitung und des Einlegens auf die Homogenität). Paper before annual meeting of Huttentechnische Vereinigung der Deutschen Glasindustrie, Bad Neuenahr, 12 Oct 56. [1962] [8]p. (foreign text included) 7 refs.
Order from SLA $1.10 62-14497

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1957, v. 30, no. 4, p. 115-116.

DESCRIPTORS: *Mixtures, Weights (Analytical), *Glass, Moisture, Sand, *Fused materials, Chemical analysis, Production.

The various possible effects of mixers, handling equipment, storage bins, addition of cullet, and charging machinery on homogeneity of mixtures are discussed. (Author)

Knapp, Oscar.
THE STATE OF MIXTURE HOMOGENIZATION (Der Stand der Gemengehomogenisierung). [1961] [17]p. (foreign text included).
Order from SLA $1.60 62-10670

Trans. of Silikat Tech[nik] (East Germany) 1961, v. 12, no. 2, p. 67-70.

DESCRIPTORS: *Mixtures, *Glass, Ball mills, Melting, Particles, Optics, Processing, Control, Weights (Analytical).

Oberlin, Frida.
ELECTRON-MICROSCOPIC INVESTIGATIONS OF WEATHERED GLASS SURFACES. Paper delivered at the Glasstechnological Convention (no. 29) Berlin, 10 May 55. [1962] 19p. (9 figs. refs. omitted).
Order from SLA $1.60 62-14496

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1956, v. 29, no. 4, p. 109-119.

DESCRIPTORS: *Glass, Surfaces, Microanalysis, Electron microscopes, Quartz crystals, Crystals, *Electron optics, Optics.

Air-weathered sheet glass surfaces in various degrees of disintegration and freshly drawn, fire-polished glass surfaces were investigated electron-microscopically by means of the impression method, likewise glass surfaces which were exposed in an air-conditioned chamber to a number of disintegration phenomena. In highly attacked surfaces with iridescent layer were found, in addition to a more or less pronounced swelling layer, calcite crystals in the order of almost 1 to 0.2 mu and less as weathering products. In preceding disintegration phases were found impression forms which indicated, on the basis of a comparison with synthetically produced preparations and substantiated by light-microscopic determinations on the glass surfaces, the presence of Na-silicates and hydrous Na_2CO_3 crystals. Freshly drawn, fire-polished surfaces (3 days old) were not electron-optically smooth but were covered with minute crystals and other disintegration forms. In the hydrolytic attack the formation of a swelling layer seems to be favored, compared to natural weathering. (Author)

Pirogov, A. A., Tseitlin, L. A., and Rakina, V. P.
KITTEN VOOR REPARATIES AAN HET VUURVASTE METSELWERK VAN IN BEDRIJF ZIJNDE COKESOVENS (Coatings for Hot Repairs of Dinas Brickwork in Coke Ovens) tr. by G. J. M. Fritschy. 16p. 9 refs. MTWL: 368 (text in Dutch).
Order from OTS or ETC $1.85 61-32047

Trans. of Ogneupory (USSR) 1948 [v. 13] no. 11, p. 492-502.

DESCRIPTORS: *Coke, *Ovens, Ceramic materials, Refractory materials, Maintenance, Brick.

Fuels, Lubricants, and Hydraulic Fluids

DESULFURIZATION OF SECOND BAKU STRAIGHT-RUN KEROSENES BY IONIZATION. 11 Sep 61, 3p. AID Rept. 61-127; AD-263 127.
Order from OTS or SLA $1.10 61-28475

Review of Izvestiya Vysshikh Uchebnykh Zavedenii. Neft' i Gaz (USSR) 1960 [v. 3] no. 4, p. 91-98 and 1961 [v. 4] no. 6, p. 81-87.

DESCRIPTORS: *Jet engine fuels, *Aviation fuels, Fuels, *Kerosene, Purification, Processing, Fractionation, Chemical impurities, Oxidation, *Ozone, Sulfur compounds, Separation, Adsorption.

Contents:
Desulfurization of ligroin and kerosene fractions of the Devonian-crude distillate from the Romashkino oilfield using ozone, by E. N. Pitskhelauri and T. A. Pospelova
Desulfurization of straight-run kerosene distillate by the ozonization-adsorption method, by E. N. Pitskhelauri, T. A. Pospelova, and V. S. Kruglikova.

THERMAL STABILITY OF JET FUELS. 17 July 61, 4p. AID Rept. 61-107; AD-261 448.
Order from OTS or SLA $1.10 61-27706

Review of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1957 [v. 2] no. 9, p. 66-70; 1960 [v. 5] no. 10, p. 35-38; 1961 [v. 6] no. 5, p. 48-53.

DESCRIPTORS: *Jet engine fuels, *Aviation fuels, Contamination, Chemical impurities, High temperature research, *Thiols, Sulfur compounds, Bronze, Brass, Corrosion, Deterioration, Catalysts, Catalysis, Test methods, Sedimentation, Stability.

Contents:
The catalytic effect of copper-base alloys on resin formation in T-type jet fuels, by I. E. Bespolov, D. E. Kestner, and O. V. Pletneva
Effect of natural resins on the stability of jet fuels at elevated temperatures, by P. I. Davydov and G. F. Bol'shakov
Effects of mercaptans on the formation of insoluble fuel sediment at elevated temperatures, by P. I. Davydov and G. F. Bol'shakov.

Belova, S. R., Vipper, A. B., and Mosikhin, E. B.
DER EINFLUSS VON ÖLADDITIVEN AUF DIE BILDUNG VON KALTSCHLAMM IN VERBRENNUNGSMOTOREN (Influence of Lubricant Additives upon the Development of Low-temperature Sediments in Internal combustion Engines). 6p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959, v. 4, no. 11, p. 18-22.

DESCRIPTORS: *Lubricant additives, Detergents, Polymerisation, *Internal combustion engines.

Chertkov, Ya. B.
METHODS OF INCREASING THE ENERGY CONTENT OF HYDROCARBON FUELS. 28 Aug 61 [8]p. 6 refs. MCL-1300; AD-264 501.
Order from OTS or SLA $1.10 62-23365

Unedited rough draft trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1960 [v. 5] no. 4, p. 1-4.

DESCRIPTORS: *Fuels, Mixtures, Fuel additives, *Hydrocarbons, *Benzenes, Monocyclic compounds, Polycyclic compounds, Combustion, Energy; Density, Molecular weight, Molecular structure.

The energy content of hydrocarbon fuel can be estimated efficiently using only the heat of combustion per unit volume. The most effective method for increasing the energy content of hydrocarbon fuel is to add the maximum amount of aromatic hydrocarbons with high density. Operations must be developed to seek methods of improving the properties of aromatic hydrocarbons during their combustion in an engine. (Author)

Cianetti, E.
DETERMINATION OF SOME ANTIOXIDANT ADDITIVES IN GASOLINE. [1962] 4p.
Order from ATS $5.60 ATS-18P59I

Trans. of Rass[egna] Chim[ica] per [il] Chim[ico] e [per l]'Ind[ustria] (Italy) 1958, v. 10, no. 3, p. 22-23

DESCRIPTORS: *Gasoline, Chemical analysis, *Antioxidants. *Additives, Determination.

Garifyanov, N. S. and Aksel'rod, M. M.
MAGNETISCHE RESONANZ EINIGER STEINKOHLEN (Magnetic Resonance in Some Kinds of Coal). 8p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959, v. 4, no. 3, p. 64-68.
Another trans. is available in English from ATS $9.95 as ATS-47L33R [1959] 6p.

DESCRIPTORS: *Resonance absorption, *Coal.

Göttner, Georg Heinz.
VISCOSITY AND VISCOSITY BEHAVIOR IN THE PHENOMENON OF LUBRICATION (Viskosität und Viskositätsverhalten beim Schmiervorgang) tr. by F. A. Raven. Dec 56, 46p. 28 refs. Bureau of Ships Translation 623; STS-250.
Order from OTS or SLA $4.60 59-12126

Trans. of Stahl und Eisen (West Germany) 1955, v. 75, no. 8, p. 502-513.

DESCRIPTORS: *Lubrication, *Viscosity, Lubricants, Temperature, Hydrodynamics, Pressure, Oils, Friction, Greases.

Investigated is the viscosity of the lubricant in function of temperature and pressure with consideration for the physical magnitudes definitive for the radial oil flow. The change of the viscosity in the lubrication clearance is discussed. The significance of the viscosity versus temperature curve, its general characteristics, and its previous evaluation are treated as well. The viscosity index is rejected as a sufficient and single-valued or unambiguous characteristic for the viscosity-temperature curve. (Author)

Graf, R.
DETERMINATION OF CONDENSATION POINT IN THE HIGH-PRESURE NATURAL GAS BY MEANS OF "DIELECTRO-METER" (Taupunktbestimmungen im Hochdruck-Erdgas mittels "Dielektrometer"). [1962] [13]p. (Foreign text included) 7 refs.
Order from SLA $1.60 62-14151

Trans. of Erdöl Zeitschrift (West Germany) 1957, v. 73, no. 4, p. 79-83.

DESCRIPTORS: *Natural gas, Gases, *Condensation, Pressure, Moisture, Determination, Dielectric properties.

Gusevskiĭ, B. N., Kaplan, S. Z., and Altman, S. S.
VERÄNDERUNG DER EIGENSCHAFTEN POLYMERISATHALTIGER ÖLE BEIM ERHITZEN (Alteration of Properties of Bodied Oils at Heating). 8p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959, v. 4, no. 1, p. 53-59.

DESCRIPTORS: *Oils, *Heating, *Polymers, Chemical properties.

Igonin, P. G., Vaksman, A. A., and Deyatova, I. D.
VERKOKUNG VON ERDÖLPECH IN INDUSTRIELLEN SILOKAÖFEN (Coking of Mineral Pitch in Industrial Silicon Ovens). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958, v. 3, no. 8, p. 59-64.

DESCRIPTORS: *Coke, Ovens, *Pitch, Mineral oils, Silicon.

Kaplan, S. Z., Dyakov, V. K., and Tsupik, N. I.
EINFLUSS VON Cu- UND Pb-NAPHTHENAT AUF DEN ABBAU VON POLYMEREN IN LEGIERTEN ÖLEN (Influence of Cu- and Pb-naphthenates upon the Decomposition of Polymers in Thickened Oils). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1960, v. 5, no. 7, p. 38-42.

DESCRIPTORS: *Lubricants, *Decomposition, *Polymers, *Oils, Pyrolysis, Lead compounds, Copper compounds.

Khrisanfova, A. I. and Zubnikov, A. K.
EXPERIMENTELL-BETRIEBLICHE ERPROBUNG EINER VERWENDUNG VON INHIBITOREN BEI DER LAGERUNG VON KOHLEN AUF HALDEN (Experimental and Operational Investigations of Inhibitors at Coal Depositing in Dumps). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958, v. 3, no. 7, p. 21-28.

DESCRIPTORS: *Coal, *Oxidation inhibitors, *Fuel depots.

Khrisanfova, A. I. and Soboleva, I. N.
VERÄNDERUNGEN DER EIGENSCHAFTEN VON STEINKOHLEN BEI DER OXYDATION UND BEI DER ERWÄRMUNG (Changed Properties of Coal at Oxidation and Heating) 16p. (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1956, v. 1, no. 2, p. 45-53.

DESCRIPTORS: *Coal, Chemical properties, Physical properties, Coal gas, *Oxidation, Heating, Luminescence, Hydrogen, Oxygen.

Kukharenko, T. A. and Ryzhova, S. A.
EINIGE BESONDERHEITEN DER VERWITTERUNG DER STEINKOHLEN IN ABHÄNGIGKEIT VON DER PETROGRAPHISCHEN ZUSAMMENSETZUNG (Some Characteristics of the Weathering of Coal as a Function of Petrographic Compound). 20p. (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliva (USSR) 1956 [v. 1] no. 4, p. 20-30.

DESCRIPTORS: *Coal, Surface properties, *Structures Geochemistry, *Chemical properties.

Küntscher, W., Holzhey, J., and Dittrich, G.
REACTIVITY OF DIFFERENT COKES. [1962] 10p.
Order from SLA $1.10 62-14390

Trans. of Neue Hütte (East Germany) 1955. v. 1, no. 1, p. 6-10.

DESCRIPTORS: *Coke, Temperature, Fuels, Test methods, Metallurgical analysis, Blast furnaces, Atmosphere.

A test procedure has been described that seems to give satisfactory characteristic values. The metallurgist is concerned with obtaining a reactivity suitable for a given process, i.e. on no account does he want a high reactivity at low temperatures. In the blast furnace process it is the main function of the coke to generate a high temperature in front of the tuyeres. The values determined with the test rig employed here show the different reaction behaviours of a number of cokes as a function of temperature as well as of atmosphere. (Author)

Losev, B. I., Troyanskaya, M. A., and Bylyna, E. A.
DIE WIRKUNG VON GAMMASTRAHLEN AUF KOHLE IN EINEM WÄSSERIGEN MEDIUM UND IN EINEM MEDIUM VON TETRACHLORKOHLENSTOFF (The Effect of γ -radiation on Coal in an Aqueous Medium and in a Carbon Tetrachloride Medium). (text in German).
Order from T.I.B. $1.40

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 120, p.314-315.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 59-18510, July 59 [6]p.

DESCRIPTORS: *Gamma rays, *Coal, Carbon tetrachloride, Water.

Losikov, B. V., Smirnov, M. S. and others.
USE OF NEUTRALIZING COMPOUNDS IN DIESEL ENGINES OPERATING ON SULFUR-RICH FUEL. [1961] [12]p. (4 figs. omitted) 8 refs. AERDL T-10; RIS E-826. AD-267 917
Order from OTS or SLA $1.60 62-13502

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1961 [v. 6] no. 2, p. 46-52.

DESCRIPTORS: *Diesel engines, *Fuels, Additives, *Sulfur compounds, Exhaust gases.

Tests were made in 1956 on a 1Ch-10.5/13 engine with fuel containing 1.25% sulfur; to the intake was admitted a 20% aqueous solution of ammonium carbonate to give $(NH_4)_2CO_3$ to the extent of 0.03% of the fuel. This technique gave very good results; the wear was reduced by a factor 2-3, and the deposition of gums was entirely inhibited. These tests were repeated on other engines with fuels containing up to 1.6% sulfur in conjunction with gaseous ammonia, which was admitted to the induction system in amounts ranging from 0.08 to 0.16% of the weight of the fuel. The NH and NH_2 radicals are active inhibitiors for the vapor-phase oxidation of sulfones; they prevent the oxidative decomposition of the hydrocarbons. The function of the ammonia is analogous to that of an antiknock additive in gasoline. The addition of a powerful antiknock additive to sulfur-rich diesel fuel produces a marked reduction in the SO_3 content of the exhaust gases. The addition of 2 ml of R-9 (0.2% tetraethyl lead) to a fuel containing 1.57% of sulfur resulted in a threefold reduction of the SO_3 content of the exhaust gases from a 2Ch-8.5/11 engine (from 22 to 6 mg per 100 liters of exhaust). The proportion of SO_2 increased correspondingly.

Makovetskiĭ, P. S. and Kholodovskaya, K. B.
EINE SCHNELLMETHODE ZUR BESTIMMUNG VON SCHWEFELGEHALT IN FLÜSSIGEM TREIBSTOFF (High-speed Method of Determination of Sulphur in Liquid Fuel). 4p. (text in German).
Order from T.I.B. $1.40

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958 [v. 3] no. 3, p. 71-72.

DESCRIPTORS: Quantitative analysis, *Sulfur, *Fuels, Mineral oils.

Melnikova, N. P., Igonin, P. G., and Sakhzadova, I. A.
UNTERSUCHUNG DER ADSORPTIONSFÄHIGKEIT VERSCHIEDENER INDIKATOREN (Investigations on Adsorption Property of Different Sorts of Coke by Means of Radioactive Indicators). (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959, v. 4, no. 1, p. 28-31.

DESCRIPTORS: Adsorption, *Adsorption indicators, *Coke, Activated carbon, Radioactivity.

Paushkin, Ya. M.
THE CHEMICAL COMPOSITION AND PROPERTIES OF FUELS FOR JET PROPULSION. May 62, approx. 480p.
Order from PP $15.00

Trans. of mono. [Khimicheskie Sostav i Svoistva Reaktivnykh Topliv, Moscow, 1958, 375p.]. Another trans. is available from LC or SLA mi$11.10, ph$77.40 as 60-19106, F-TS-9716, Nov 59 [502]p.

DESCRIPTORS: *Jet propulsion, Propulsion, Fuels, Physical properties, Chemical properties, *Jet engine fuels, Rocket fuels, Gas turbines, Turbo-jet engines, Jet engines, Combustion, Lubricants, Rocket oxidizers, Oxidizers, Ionorganic substances, Metal-organic compounds, Hydrocarbons, Petroleum, Liquefied gases, Gases, Hydrogen compounds, Peroxides, Space probes, Satellite vehicles, Production.

For abstract see Technical Translations 4: 284, 1960.

Sentyurikhina, L. N. and Malyshev, B. N.
A HIGH-VACUUM, HIGH-TEMPERATURE, SOLID LUBRICANT. 4 Oct 61 [9]p. 5 refs. FTD-TT-61-58; AD-265 806.
Order from OTS or SLA $1.10 62-23376

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1961 [v. 6] no. 7, p. 13-15.

DESCRIPTORS: *Lubricants, Solids, *Molybdenum compounds, Sulfides, High temperature research, Low pressure research, Films, Adhesion, Metals.

Molybdenum disulfide (MoS_2) was the solid lubricant studied.

Smutkina, Z. S.
UNTERSUCHUNG DER KINETIK DER THERMISCHEN ZERSETZUNG MINERALISCHER FESTER BRENNSTOFFE (Investigations on the Kinetics of Thermal Decomposition of Mineral Solid Fuels). 12p. (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1957 [v. 2] no. 5, p. 27-32.

DESCRIPTORS: *Pyrolysis, *Fuels, *Coal, Bitumens.

Vinogradov, G. V. and Arkharova, V. V.
DIE BESONDERHEITEN DER VERSCHLEISS- UND REIBUNGSMINDERNDEN EIGENSCHAFTEN VON KOHLENWASSERSTOFFEN UNTER ERSCHWERTEN REIBUNGSBEDINGUNGEN (Characteristics of Wear-resisting and Antifriction Properties of Hydrocarbons at Complicated Friction Conditions). 5p. (text in German).
Order from T.I.B. $1.40

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1960 [v. 5] no. 5, p. 45-49.

DESCRIPTORS: *Hydrocarbons, *Friction, *Abrasion, *Lubricants, Physical properties.

Vipper, A. B., Mosikhin, E. P., and Belova, S. R.
EINIGE GESETZMÄSSIGKEITEN DER ABNAHME VON DETERGENTS IN ÖLEN (Some Regularities at the Decrease of Detergents in Oils). 7p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959, v. 4, no. 1, p. 59-63.
Another trans. is available in English from ATS $7.50 as ATS-76L31R [1959] 6p.

DESCRIPTORS: *Detergents, *Oils, Physical properties.

Zamoluev, V. K.
DIE WÄRMEEIGENSCHAFTEN VON STEINKOHLEN BEI IHRER THERMISCHEN ZERSETZUNG (Thermal Properties of Coal at its Thermal Decomposition). 10p. (text in German).
Order from T.I.B. $1.55

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959 [v. 4] no. 7, p. 20-23.

DESCRIPTORS: *Coal, *Pyrolysis, Physical properties

Leather and Textiles

Fröhlich, H. G.
THE PROCESSES TAKING PLACE IN THE DYEING OF CELLULOSE FIBRES WITH REACTIVE DYES (Über die Vorgänge beim Farben von Zellulosefasern mit Reaktivfarbstoffen) tr. by D. A. Sinclair. 1962, 18p. 35 refs. NRCC Technical Trans. 1012.
Order from NRCC $1.00 NRCC C-3945

Trans. of Z[eitschrift für die] Ges[amte] Textil-Ind[ustrie] (West Germany) 1961, v. 63, no. 1, p. 47-51.

DESCRIPTORS: *Fibers, *Cellulose, *Dyeing, *Dyes, Chemical reactions, Chemical bonds, Hydrolysis.

Glenz, Oskar
INVESTIGATIONS INTO THE WATERPROOFING OF TEXTILES WITH SILICONES (Untersuchungen über die Hydrophobierung von Textilien mit Siliconen) tr. by H. A. G. Nathan. 1962, 20p. 3 refs. NRCC Technical Trans. 1013.
Order from NRCC $1.00 NRCC C-3948

Trans. of Melliand Textilberichte (West Germany) 1960, v. 41, no. 9, p. 1125-1129.

DESCRIPTORS: *Textiles, *Moistureproofing, *Silanes, Manufacturing methods.

Imoto, Tatsuya and Nakai, Yutaka.
STUDIES IN POLYVINYLCHLORIDE. XXVIII. SPECIFIC GRAVITY AND CRYSTALLINITY OF PURE PVC-FIBER, tr. by Noburu Hiraga. Rept. 28 on Studies on Polyvinylchloride. [1959] 15p. 10 refs.
Order from OTS or SLA $1.60 SCL-T-264

Trans. of [Sen-i Gakkaishi] (Japan) 1957, v. 13, no no. 12, p. 808-812.
Another translation is available from SLA mi$2.40, ph$3.30 as 59-15807 [1959] [13]p.

DESCRIPTORS: *Synthetic fibers, *Vinyl chlorides, Density, Crystallization, X-ray diffraction analysis.

A linear correlation was found between the specific gravities of PVC-fibers drawn into various stages and multiple drawn ratio. The crystallization constant of the PVC-fiber was determined from X-ray diffraction photos.

Lünenschloss, J. and Kurth, H.
THE WEATHER RESISTANCE OF POLYPROPYLENE FIBERS (Die Wetterbeständigkeit von Polypropylenfasern) tr. by D. A. Sinclair. 1962, 10p. 7 refs.
NRCC Technical Trans. 1011.
Order from NRCC $0.50 NRCC C-3955

Trans. of Textil-Praxis (West Germany) 1961, v. 16, no. 9, p. 875-877.

DESCRIPTORS: *Propenes, *Polymers, *Synthetic fibers, Exposure, Resistance, Mechanical properties, Tests, Weatherproofing, *Fibers.

Mosse, P.
RECENT DEVELOPMENTS IN TEXTILE BLEACHING WITH SODIUM CHLORITE (Developpements Récents dans le Blanchiment des Textiles au Chlorite de Sodium). [1961] [30]p. (6 figs. 22 tables refs. omitted omitted).
Order from SLA $2.60 62-14083

Trans. of Teintex (France) 1954, v. 19 [no. 11] p. 811-838.

DESCRIPTORS: *Textiles, Bleaching, *Sodium compounds, *Chlorites, *Synthetic fibers, *Bleaching agents, Corrosion.

Rumens, W., Ruttiger, W., and Gotz, N.
THE EFFECT OF N-HYDROXYMETHYL COMPOUNDS ON THE CHLORINE RESISTANCE OF WASH-AND-WEAR FINISHES. [1962] 23p.
Order from ATS $29.95 ATS-84P59G

Trans. of Melliand Textilber[ichte] (West Germany) 1961, v. 42, no. 11, p. 1292-1301.

DESCRIPTORS: *Textiles, Synthetic fiber, *Finishes, Chlorine, Resistance, Organic compounds, Methyl radicals, Hydroxides, Chemical reactions.

Vogler, K.
INTRODUCTION AND GUIDE TO THE QUANTITATIVE ANALYSIS OF FIBERS WITH CONSIDERATION OF THE NEW COMPLETELY SYNTHETIC ARTIFICIAL FIBERS (Anleitung zur Quantitativen Faseranalyse, unter Berücksichtigung der neuen Vollsynthetischen Kunstfasern) tr. by F. A. Raven. Nov 56 [40]p. 14 refs. STS-252; Bureau of Ships Trans. 624.
Order from OTS or SLA $3.60 60-15719

Trans. of Schweizer Archiv für Angewandte Wissenschaft und Technik, 1955, v. 21, no. 7, p. 209-222.

DESCRIPTORS: *Fibers, *Synthetic fibers, Quantitative analysis, Textile industry.

Paints and Finishes

Ruzickova, J., Pokorny, S., and Mleziva, J.
PIGMENTATION OF POLYESTER VARNISHES. [1962] 10p.
Order from ATS $14.45 ATS-48P60C

Trans. of Chem[icky] Prumysl (Czechoslovakia) 1961, v. 11(36), no. 6, p. 328-332.

DESCRIPTORS: Polymers, Esters, *Varnishes, *Pigments.

Sikorski, R. T., Rabek, T. I. and Skwara, J.
PRODUCTION OF POLYVALENT METAL POLYACRYLATES AND USE AS PAINT DRIERS. Apr 62, 1250 words.
Order from TTIS $12.00 TTIS 2361

Trans. of Plaste und Kautschuk (Germany) 1961, v. 8, Dec, p. 591-593.

DESCRIPTORS: *Plastic paints, Paints, *Polymers, *Acrylic resins, *Metals.

Photographic Materials

Behmenburg, Hans.
ELECTROPHOTOGRAPHY: A REPRODUCTION METHOD OF THE FUTURE. 7p.
Order from SLA $1.10 62-10019

Trans. of Ozalid-Nachrichten (West Germany) 1957(?) no. 20, insert.

DESCRIPTORS: Photography, *Electrophotography, Photographic equipment, Photographic film, Photographic paper.

Gorokhovskii, Yu. N., Levina, V. V., and Popova, K. B.
TESTING COLOR PHOTOGRAPHIC PAPER WITH A DYE DIATEST. [1962] 8p.
Order from ATS $9.90 ATS-60P59R

Trans. of Zhur[nal] Nauch[noi] i Priklad[noi] Fot[ografii] i Kinematografii (USSR) 1961, v. 6, no. 4, p. 289-293.

DESCRIPTORS: *Color photography, *Photographic paper, Paper, Test methods.

Kalix, Alfred.
PATENTS AND PATENT APPLICATIONS ON XEROGRAPHY. [1962] 18p. 141 refs.
Order from SLA $1.60 62-10544

Trans. of Nachr[ichten für] Dok[umentation] (West Germany) 1960, v. 11, no. 3, p. 156-159.

DESCRIPTORS: *Patents, *Electrophotography, Photography,

Kucher, R. V. and Yurzhenko, A. I.
THE RATE OF DECOMPOSITION OF ISOPROPYLBENZENE HYDROPEROXIDE IN AQUEOUS SOLUTIONS OF EMULSIFIERS. [1962] 8p.
Order from ATS $14.50 ATS-76P59R

Trans. of #Kolloid[nyi] Zhur[nal] (USSR) 1956, v. 18, no. 5, p. 555-561.

DESCRIPTORS: *Propyl radicals, Benzenes, *Hydroperoxides, Decomposition, Solutions, *Photographic emulsions.

Lapauri, A. A.
DEPTH OF FIELD OF LENS AND NEW FORMS OF MOTION PICTURE FILMING. [1962] 15p.
Order from ATS $19.85 ATS-81P59R

Trans. of Tekh[nika] Kino i Televideniya (USSR) 1961, v. 5, no. 7, p. 10-20.

DESCRIPTORS: *Motion picture photography, *Photographic lenses, *Lenses, Photography.

Pauli, Hans-Georg.
THE MOST IMPORTANT PHOTOGRAPHIC PROCESSES AND THEIR APPLICATION. [1961] 10p.
Order from SLA $1.10 62-14209

Trans. of Bild und Ton (Germany) 1955, v. 8, no. 5, p. 128-[131].

DESCRIPTORS: *Photography, Photographs, Processing, Photographic equipment.

Szucs, Miklos.
LIGHT-SENSITIVE SYSTEMS BASED ON OTHER THAN SILVER HALIDE COMPOUNDS. [1962] 8p.
Order from ATS $16.50 ATS-80P59H

Trans. of Kep es Hangtechnika (Hungary) 1961, v. 7, no. 4, p. 109-112.

DESCRIPTORS: *Photographic emulsions, *Silver compounds, *Halides, Sensitivity.

Plastics

PLASTICS IN MEDICINE, CHAPS. 1-2 AND CONCLUSION. 23 Feb 62 [24]p. JPRS: 12715.
Order from OTS or SLA $2.60 62-19760

Trans. of mono. Plastmassy v Meditsine, Moscow, 1961, p. 9-20, 21-35, 175.

DESCRIPTORS: *Plastics, *Medicine, Acrylic resins Ethylenes, Polymers, Urethanes, Synthetic fibers, Vinyl chlorides.

Contents:
Types of plastics used in medicine
Experimental investigation of plastics for medical purposes, by [I. I. Revzin]
Conclusion.

Imoto, Tatsuya
STUDIES ON POLYVINYLCHLORIDE. XXIX. MAXIMUM POINT IN THE SHRINKAGE CURVE OF THE PVC-FIBER, tr. by Noburu Hiraga. [1959] 17p. (1 fig. omitted) 10 refs.
Order from OTS or SLA $1.60 SCL-T-265

Trans. of [Sen-i Gakhaishi] (Japan) 1957, v. 13, no. 12, p. 813-816.

DESCRIPTORS: *Vinyl chlorides, *Synthetic fibers, Elasticity, Heat tolerance, Creep, Deformation, Thermal stresses, Fibers, Viscosity, Mechanical properties.

In this study of the thermal shrinkage deformation of the polyvinylchloride fiber, particularly on its maximum shrinking point which results from the two opposing actions of shrinkage and creep, through application of two types of Voigt models and using the elapsed time to the maximum point as t_m, shrinkage deformation at the maximum point as γ_m, we found that an aspect of thermal shrinkage action could be explained by the following relation. Suspended load S_2 and t_m are in a relationship of $-\ln S_2 \propto t_m$, Thermal shrinkage temperature and t_m are in a relationship of $\ln t_m \propto 1/T$. When a sample material has already been thermally drawn, there is a $\ln L \propto t_m$ relation between its drawn ratio L and t_m. Furthermore, there is a $S_2 \propto \gamma_m$ relation and along with it shrinkage deformation rate γ_f at the time of free shrinkage is in proportion to L, namely $\gamma_f \propto L_o$. (Author) (See also 59-22044)

Trautvetter, Robert.
DUROPLASTIC IN THE WOOD INDUSTRY (Duroplaste in der Holzindustrie) tr. by Emilie Minor. [1959] [7]p. (2 figs. omitted). H 4111.
Order from OTS or SLA $1.10 59-21153

Trans. of die Holzindustrie (East Germany) 1959 [v. 12] no. 3, p. 77-79.

DESCRIPTORS: *Wood, *Plastics, *Phenolic resins, Laminates, Glass textiles, Chemical industry, Production, East Germany.

Rubber and Elastomers

Natta, G., Crespi, G. and Bruzzone, M.
ELASTOMERS FROM CHLOROSULFONYLATED POLYMERS AND COPOLYMERS OF ALPHA-OLEPHINS 15p. 10 refs. MTWL: 1108.
Order from OTS or ETC $1.85 62-26054

Trans. of Chimica e l'Industria (Italy) 1960, v. 42, no. 5, p. 463-467.
Another trans. is available from CTS(Chem) $14.25 as CTS(Chem)-134 [1960] 13p.

DESCRIPTORS: *Elastomers, Polymers, *Ethylenes, Chlorosulfonic acid, *Sulfonyl radicals, Chlorides, Sulfur compounds, Oxides, Chlorine.

Office of Technical Services, Dept. of Commerce, Washington, D. C.
RUBBER (SUPPLEMENT TO CTR-321). Feb 62, 22p. 455 refs. OTS Selective Bibliography SB-494.
Order from OTS $0.10 OTS SB-494

DESCRIPTORS: *Rubber, Bibliography, Vulcanizates, Rubber gaskets, Rubber seals, Resistance.

Lists 455 domestic and foreign references added to the OTS collection during the period 1956 to February 1962. Includes reports on rubber (general); ozone resistant rubber; rubber seals, gaskets, etc.; vulcanizates; abrasion, chemical temperature, and radiation resistance. Translations, AEC reports, and government-owned patents are listed in special sections.

Wood and Paper

Fahmy, Yehia and Abu-State, Amin.
INFLUENCE OF MORPHOLOGICAL, CHEMICAL AND SOME PHYSICAL PROPERTIES OF THE PULP ON THE FILTERABILITY OF THE VISCOSES. Pt. 1 On the Testing of Rayon Grade Pulps. May 62, 5240 words.
Order from LSA $50.00

Trans. of das Papier (West Germany) 1961, v. 15, no. 5, p. 44-51

DESCRIPTORS: *Wood pulp, Chemical properties, Physical properties.

Kolos, Frans.
REQUIREMENTS FOR CONDUCTOMETRIC DETERMINATIONS OF THE PARTICLE SIZE DISTRIBUTION IN VISCOSE SOLUTIONS. [1961] [20]p. (1 fig. omitted) 17 refs.
Order from SLA $1.60 62-10611

Trans. of Svensk Pappers-tidning, 1961, v. 64, p. 533-544.

DESCRIPTORS: *Cellulose, *Solutions, *Particles, Conductivity, Gels, Resins, Sand, Counting methods, *Wood pulp.

Perepelkin, K. E.
FUNDAMENTAL PROCESSES DURING THE DEAERATION OF VISCOSE [Osnovnye Protsessy pri Obezvozdushivanii Viskozy] tr. by I. Gawronska. 17 Oct 61, 11p. 20 refs. Courtaulds Misc. Lit. 3386; NLL M.3519.
Order from OTS or SLA $1.60 62-23871

Trans. of Khim[icheskie] Volok[na] (USSR) 1959, no. 3, p. 39-42.
Another trans. is available from OTS or SLA $1.10 as 61-19694, RTS-1808, Apr 61 [10]p.

DESCRIPTORS: *Cellulose, *Air *Bubbles, Solutions, Separation.

For abstract see Technical Translations 6: 45, 1961.

Ugolev, B. N.
AN ANALYSIS OF THE STRESSES STATE OF WOOD IN THE PROCESS OF DRYING (Analiz Napryazhennogo Sostoyaniya Drevesiny v Protsesse Sushki). 1961, 18p. 9 refs. PL-480 Agr.
Order from OTS $0.50 60-51019

Trans. of Derevoobrabatyvayushchaya Promyshlennost (USSR) 1957 [v. 6] no. 4, p. 8-11 and no. 5, p. 10-12.

DESCRIPTORS: *Wood, Processing, *Moisture, Stresses, Measurement, Mathematical analysis

The analysis which was applied to the stressed state in the wood shows that total internal stresses in the wood during drying and after its completion may be regarded as a sum of moisture-due and residual stresses. The proposed method for the determination of moisture-due stresses and the formulas developed, allow these stresses to be characterized quantitatively. By comparing the moisture-due stresses with the total stresses, using the example of drying wood in closed storage, the value of the residual stresses appearing in the material during drying could be obtained. A comparison of the residual stresses thus obtained with the measured residual stresses (after moisture equalization) permits the quantitative study of the effect of the relaxation of residual stresses. (Author)

Yukna, A. D. and Ozolinsh, A. P.
METHODE DE DETERMINATION EXPEDITIVE DES PROPRIETES PHYSICO-MECANIQUES ET TECHNOLOGIQUES DES PLAQUES DE COPEAUX DE BOIS (Method of Quick Determination of the Physico-mechanical, and Technological Properties of the Planks of Chipped Wood). 11p. (foreign text included). 3 refs. F/R-2596. (text in French).
Order from OTS or ETC $1.55 62-28011

Trans. of [Akademiya Nauk Latviiskoi SSR, Riga]. Institut Lesokhozyaistvennykh Problem i Khimii Drevesiny. Trudy (USSR) 1960, v. 18, p. 27-33.

DESCRIPTORS: *Wood pulp, Mechanical properties, Physical properties, *Fiberboard, Determination, Tests.

Ziedin'sh, I. O.
ETUDE DES VARIATIONS d'HUMIDITE DANS UNE PLAQUE DE COPEAUX DE BOIS PENDANT LE PRESSAGE A CHAUD (Issledovaniya Izmeneiĭ Vlazhnosti i Drevesno-struzhechnoĭ Plite vo Vremya Goryachego Pressovaniya) (Study of the Variations of Humidity in a Plank of Chipped Wood During the Pressing in the Acute Stage). 40p. (foreign text included). 5 refs. F/R-2594. (text in French).
Order from OTS or ETC $2.65 62-28008

Trans. of [Akademiya Nauk Latviiskoi SSR, Riga]. Institut Lesokhozyaistvennykh Problem i Khimii Drevesiny. Trudy (USSR) 1960, v. 18, p. 47-65.

DESCRIPTORS: *Wood pulp, Humidity, *Pressure, Heat, Tests, *Fiberboard.

MATHEMATICS

Berlyand, O. S., Gavrilova, R. I., and Prudnikov, A. P.
TABLES OF INTEGRAL ERROR FUNCTIONS AND HERMITE POLYNOMIALS. Mathematical Tables Series, v. 19, July 62, 164p.
Order from PP $15.00

Trans. of unidentified Russian mono., n.p., n. d.

DESCRIPTORS: *Functions, *Polynomials, *Tables.

Dupac, Vaclav.
ON THE KIEFER-WOLFOWITZ APPROXIMATION METHOD (O Kiefer-Wolfowitzove Aproximacni Methode) tr by M. D. Friedman. 24 Feb 60 [55]p. 11 refs. LL 22G-0008.
Order from OTS or SLA $5.60 60-17178

Trans. of Casopis pro Pestovani Matematiky (Czechoslovakia) 1957, v. 82, p. 47-75.

DESCRIPTORS: *Numerical methods and procedures, Probability, Sequences, Statistical functions, Inequalities.

Asymptotic properties are established for the Kiefer-Wolfowitz procedure (Ann. Math. Statistics 23: 462-466, 1952) of finding the value $x = \theta$, for which the regression function $M(x) = \int_{-\infty}^{\infty} y \, dH(y \mid x)$ achieves its maximum. The original assumptions are modified in such a way that it is possible to use the mathematical tools of K. L. Chung (Ann. Math. Statistics 25: 463-483, 1954). Two different cases are treated.

Lando, Yu. K.
BOUNDARY PROBLEM FOR LINEAR INTEGRO-DIFFERENTIAL EQUATIONS OF VOLTERRA TYPE FOR DECAYING BOUNDARY CONDITIONS. [1961] 10p. 3 refs. MDF L-140.
Order from OTS or SLA $1.10 62-13703

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii] Matem[atika] (USSR) 1961, no. 3(22) p. 56-65.

DESCRIPTORS: *Integral equations, *Green's function, Operators (Mathematics), Functions, Theory, Differential equations.

The question of the expansion of functions in eigenfunctions of the boundary problem is investigated for the equation $u^{(n)}(x) + \sum_{i}^{n-2} a_i(x) u^{(i)}(x) + \sum_{i}^{n-1} \int_{0}^{x} A_i(x, t, \rho) u^{(i)}(t)dt + \lambda \int_{0}^{x} u(t)dt = f(x)$, where $\lambda = \rho^{n+1}$, with the decaying boundary conditions: $R_j(u) = \sum_{k=0}^{n-1} \alpha_{jk} u_o^{(k)} = 0$, where $j = 1, 2, \ldots, m$; and $R_j(u) = \sum_{k=0}^{n-1} \beta_{jk} u_1^{(k)} = 0$, where $j = m+1, m+2, \ldots, n$. Here $u_o^{(k)} = \frac{d^k u}{dx^k}\Big|_{x=0}$; $u_1^{(k)} = \frac{d^k u}{dx^k}_{x=1}$; $0 \leq m < n$. It is assumed that the Green's function has only prime roots. The m-fold completeness of the system of eigen and associated functions of the boundary problem is established. The results obtained are based on a theorem of M. V. Keldysh. (Doklady Akad. Nauk SSSR 77: 11-14, 1951).

Mitamura, T.
ON ANALYSING THE ACCURACY OF METHODS OF DEVELOPING OF SHELL PLATES BY DIFFERENTIAL GEOMETRY. 29p. 5 refs.
Order from OTS or ETC $2.45 62-26010

Trans. of [Zosen Kyokai Rombun Shu] (Japan) 1960, v. 106, p. 275-284.

DESCRIPTORS: *Differential geometry, *Surfaces, Structural shells, Curved profiles, Design, Pressure vessels.

Sagalovich, Yu. L.
ON GROUP INVARIANCE OF BOOLEAN FUNCTIONS. [1959] 6p. 4 refs. MDF S-146; AFCRL-TN-60-171; AD-234 717.
Order from OTS $0.50 62-11272

Trans. of Usp[ekhi] Matem[aticheskikh] Nauk (USSR) 1959, v. 14, no. 6(90), p. 191-195.

DESCRIPTORS: *Groups (Mathematics), *Special functions, Algebras, Transformations (Mathematics).

Quantitative relations related to an arbitrary Boolean function are obtained while keeping in mind that the function is subject to substitution of variable transformations.

Computing Devices

Baba, Fumio and Fukushima, Ikuzo.
THE PARAMETRON. 21 Jan 59, 21p. (29 figs. omitted). LL-qd-3661.
Order from OTS or SLA $2.60 59-14249

Trans. of unideptified Japanese mono. issued by Mitsubish: Electronics Works (?).

DESCRIPTORS: *Digital computers, Computers, *Switching circuits, Circuits, *Magnetic cores, Oscillation, Frequency, Operation, Design.

Kitov, A. I. and Krinichkiĭ, N. A.
FORMELE VERANDERINGEN VAN LOGISCHE PROGRAMMA'S (Formal Changes of Logical Programs) tr. by G. B. J. Overbeek. 1961, 29p. (text in Dutch) MTWL: 1113.
Order from OTS or ETC $2.43 62-26070

Trans. of mono Elektronnye Tsifrovye Mashini i Programmirovanie, Moscow, 1959, chap. 9, p. 452-480. A complete trans. is available in English from LC or SLA mi$3.30, ph$7.80 as 61-15622, Rand T-134, 30 Dec 60, [43]p.

DESCRIPTORS: *Programming, Mathematical logic, *Operators, *Switching circuits.

Kobrinskii, A. E., Korendyasev, A. I., and Levkovskii, E. I.
CLASSIFICATION OF AUTOMATIC MACHINES IN TERMS OF INFORMATION PARAMETERS. 29 Mar 62 [13]p. 10 refs. JPRS: 13241.
Order from OTS or SLA $1.60 62-23756

Trans. of Akademiya Nauk SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izvestiya: Energetika i Avtomatika, 1961, no. 6, p. 3-12.

DESCRIPTORS: *Data processing systems, Design, Synthesis, Classification, Digital computers, Analog computers, Computers, Programming, Automatic, *Milling machines, Machines, *Control systems.

MECHANICS

Feodos'ev, V. I.
ON THE STABILITY OF A SPHERICAL SHELL, SUBJECTED TO THE ACTION OF EXTERNAL HYDROSTATIC PRESSURE, tr. by G. Herrmann. Rept. on Contract NPS-8331. 1956, 17p. 7 refs. DTMB Trans. 266.
Order from OTS or ETC $1.85 62-26064

Trans. of Prikladnaya Matematika i Mekhanika (USSR) 1954, v. 18, p. 35-42.
Another trans. is available from SLA as RT-3643.

DESCRIPTORS: Hydrostatic pressure, *Stability, *Structural shells, Theory.

Kerimov, Z. G.
LONGITUDINAL OSCILLATIONS IN COLUMNS OF DRILL PIPE. [1962] 4p.
Order from ATS $5.95 ATS-09P60R

Trans. of Akad[emiya] Nauk Azerbaidzhan[skoi] SSR [Baku]. Doklady, 1961, v. 17, no. 8, p. 671-675.

DESCRIPTORS: *Drills, *Pipes, Oscillation, Vibration.

Mushtari, Kh. M.
ON THE THEORY OF STABILITY OF A SPHERICAL SHELL SUBJECTED TO EXTERNAL PRESSURE, WITH REFERENCE TO THE PAPER BY V. I. FEODOS'EV, tr. by G. Herrmann. Rept. on Contract NPS-8331. 1956, 13p. 3 refs. DTMB Trans. 263.
Order from OTS or ETC $1.85 62-26065

Trans. of Prikladnaya Matematika i Mekhanika (USSR) 1955, v. 19, p. 251-254.
Another trans. is available from SLA as RT-3642.

DESCRIPTORS: *Structural shells, Hydrostatic pressure, *Stability, Theory.

Oehler, G.
BENDING AND BUCKLING STRENGTH OF BLISTERED SHEETS (Giege- und Knickfestigkeit von Warzen- bzw. Buckelblechen) ed. and tr. by F. A. Raven, Science Translation Service. Mar 58, 10p. 2 refs. STS-282; Bureau of Ships Translation 652.
Order from OTS or SLA $1.60 59-12036

Trans. of Forschungsgesellschaft Blechverarbeitung e.V. Mitteilungen (Germany) 1957, no. 14, p. 4.

DESCRIPTORS: *Steel, *Sheets, Metal plates, *Deformation, *Buckling, Load distribution, Tests.

Aerodynamics and Pneumatics

Abaev, G. N.
ZUR BERECHNUNG DER DURCHFLUSSMENGE AN FESTSTOFFEN BEI DER BLASFÖRDERUNG (Calculation of Quantity of Flow for Solids at Pneumatic Conveying). (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1960, v. 5, no. 3, p. 28-35.

DESCRIPTORS: *Transportation, *Pneumatic systems, *Solids.

Berezovets, G. T. and Chu Tsin-Len
DIE EXPERIMENTELLE UNTERSUCHUNG DER CHARAKTERISTIKEN VON MEMBRANEN AUS KAUTSCHUKGEWEBEN (Experimental Investigation of Rubber-fabric Membrane Characteristics). 11p. (text in German).
Order from T.I.B. $1.85

#Trans. of Avtomatika i Telemekhanika (USSR) 1960, v. 21, no. 3, p. 323-332.

DESCRIPTORS: *Membranes, *Rubber, Pneumatic devices, Tests.

Bertin, J. and Nabour, M. Le.
CONTRIBUTION TO THE DEVELOPMENT OF DUCTS AND EJECTORS (Contribution au Développment des Trompes et Ejecteurs) tr. by G. A. Gavrel. 1961, 30p. 6 refs. NRCC Technical trans. 976.
Order from NRCC $1.50 NRCC C-3742

Trans. of Technique et Science Aéronautiques (France) 1959, no. 3, p. 127-138.

DESCRIPTORS: *Air ejectors, *Ducts, Operation, Temperature, Pressure, Reynolds number, Diffusers

Duchač, S.
AIR NAVIGATION. 6p. MTWL: 1081.
Order from OTS or ETC $1.55 62-26032

Trans. of table of contents of mono. Letecka Navigace, Prague, 1959.

DESCRIPTORS: *Aeronautics, *Navigation, Indexes.

Losev, S. A. and Osipov, A. I.
STUDY OF NONEQUILIBRIUM PHENOMENA IN SHOCK WAVES. 11 Dec 61 [88]p. 191 refs.
FTD-TT-61-196; AD-268 874.
Order from OTS or SLA $8.10 62-23369

Unedited rough draft trans. of Uspekhi Fizicheskikh Nauk (USSR) 1961, v. 74, no. 3, p. 393-434.

DESCRIPTORS: Shock waves, Propagation, Gases, Theory, Experimental data, Shock tubes, *Gas diffusion, Relaxation time, Irreversible processes

A survey is presented of the basic methods and the results of theoretical and experimental study of the various relaxation phenomena in shock waves. A theoretical examination of the equilibrium establishment is discussed according to individual degrees of freedom the examination is made on the basis of the kinetic theory of gases. The experimental study of the state of the gas in shock waves is then discussed. The method using shock tubes is examined. Only endothermic processes in gases are examined. (ASTIA abstract)

Hydrodynamics, Hydraulics, and Hydrostatics

HYDROTECHNIC STRUCTURES AND WATER FLOW CONTROL: SELECTED ARTICLES. 1962, 56p. 21 refs. PL-480 Int.
Order from OTS $0.50 61-31063/1-9

Trans. of Gidrotekhnicheskoe Stroitel'stvo (USSR) 1960 [v. 30] no. 7, p. 13-17, 20-24, 27-35, 39-46; Plasticheskie Massy (USSR) 1960, no. 6, p. 19-22; Gidrotekhnika i Melioratsiya (USSR) 1960 [v. 12] no. 10, p. 41-47.

DESCRIPTORS: *Hydraulic systems, Structures, *Dams, Design, Construction, Materials, Concrete, Temperature, Model tests, Water, Fluid flow, Control, Velocity, Pipes, Joints, *Water supplies, Deserts.

Contents:
Experience in anchoring concrete structures, by A. P. Timofeev
The temperature conditions of a massive concrete dam during the process of its construction, by G. I. Chilingarishvili
Determination of the basic dimensions of concrete water-retaining structures with flat underground outlines, by A. I. Antipov
Modeling of arch dams, by K. M. Khuberyan
Graphoanalytical method of construction of the velocity field of a calm flow upon abrupt unilateral widening of the channel, by I. V. Lebedev
Velocity profile in a stream channel, by Yu. A. Ibad-Zade
Organic mineral concrete without cement, by V. I. Itinskii and others
Flexible joints for water pipes, by V. G. Il'in
Construction of pitwells in the Kalmyk Region, by Ya. M. Voron.

Alikhashkin, Ya. I.
NUMERICAL INTEGRATION OF THE EQUATION MODELING THE MOVEMENT OF A TWO-FLUID INTERFACE IN A POROUS MEDIUM. [1962] 6p.
Order from ATS $7.75 ATS-96P59R

Trans. of Akad[emiya] Nauk SSSR. Otdel[enie] Tekh[nicheskikh] Nauk. Izvest [iya]: Mekh[anika] i Mashinostr[oenie] 1961, no. 5, p. 159-162.

DESCRIPTORS: *Fluid flow, Numerical analysis, Differential equations, Integration.

Evdokimov, S. E.
DETERMINATION DES PARAMETRES d'UN GISEMENT d'APRES LES RESULTATS DE MESURES A DISTANCE DES CHANGEMENTS DE PRESSION (Determination of the Parameters of a Seam after the Results of Measuring at a Distance the Change of the Pressure) 8p. (foreign text included). 5 refs. F/R-2595. (text in French).
Order from OTS or ETC $1.55 62-28009

Trans. of [Izvestiya Vysshikh Uchebnykh Zavedenii]. Neft' i Gaz (USSR) 1961 [v. 4] no. 8, p. 59-62.
Another trans. is available in English from ATS $6.55 as ATS-46N58R [1961] 5p.

DESCRIPTORS: *Mineral oils, *Boreholes, *Fluid filters, *Hydrodynamics, Pressure, Measurement.

Iskenderov, I. A. and Kantor, A. G.
DESIGNING OFFSHORE PIPELINES TO ALLOW FOR THE ACTION OF SEA WAVES. [1962] 7p.
Order from ATS $7.00 ATS-99N56R

Trans. of Stroitel['stvo] Truboprovodov (USSR) 1961, v. 6, no. 7, p. 14-16.

DESCRIPTORS: *Pipes, Pipe fittings, Design, *Hydrodynamics, Sea water, Water waves.

Kondrat'ev, N. E., Lyapin, A. N. and others.
RIVER FLOW AND RIVER CHANNEL FORMATION, CHAPS. 7-9, tr. by Y. Prushansky. 1962, 172p. PL-480 Int.
Order from OTS $1.75 61-11432

Trans. of mono. Ruslovoi Protsess, Leningrad, 1959, p. 200-[361].

DESCRIPTORS: *Inland waterways, Fluid flow, *Hydraulic research, *Sedimentation, Motion, Theory, Hydrodynamics.

Contents:
Theory of sediment movement
Stream kinematics around curves and formation of bends
Morphometric characteristics of lowland river channels.

Lubyako, G. N.
FUNDAMENTAL EQUATIONS OF MOTION OF THE GROUND WATER TOWARD THE DRAINS IN INHOMOGENOUS GROUNDS (Osnovnye Uravneniya Dvizheniya Gruntovykh Vod k Drenam v Neodnorodnykh Gruntakh). 1962, 28p. 6 refs. PL-480 Int.
Order from OTS $0.50 61-31047

Trans. of Aralo-Kaspiiskaya Kompleksnaya Ekspeditsiya 194[8]-50. Trudy (USSR) 1956, v. 7, p. 197-221.

DESCRIPTORS: *Hydrology, *Drainage, Soils, *Hydrodynamics, Permeability, Fluid flow, Mathematical analysis, *Differential equations.

Mozharov, N. A.
INVESTIGATING THE CRITICAL VELOCITY OF STRIPPING OF THE MOISTURE FILM FROM THE WALLS OF STEAM PIPES [Issledovanie Kriticheskoi Skorosti Sryva Plenki Vlagi so Stenki Paroprovoda]. 2 Apr 62 [8]p. 4 refs. FT-650.
Order from OTS or SLA $1.10 AEC-tr-5049

Trans. of Teploenergetika (USSR) 1959, v. 6, no. 2, p. 50-53.
Other translations are available from LC or SLA mi$1.80, ph$1.80 as 61-13996, RTS-1581, Nov 60 [9]p. and 61-13206, DSIR LLU M. 1885 [1960] 9p.

DESCRIPTORS: *Steam pipes, Pipes, Walls, *Moisture, Films, *Steam, Velocity, Surface tension, Pressure, Hydrodynamics.

Smekhov, E. M., Goryunov, I. I., and Romm, E. S.
EXPERIENCE GAINED FROM SYSTEMATIC STUDIES OF FRACTURED OIL AND GAS RESERVOIRS AND MEANS OF THEIR PRACTICAL APPLICATION. [1962] 39p.
Order from ATS $27.50 ATS-87P58R

Trans. of Vsesoyuz[nyi] Neftyan[oi] Nauch[no]-Issledovatel'[skii] Geologo-Razvedochnyi Inst[itut]. Trudy (USSR) 1959, no. 144, p. 1-52.

DESCRIPTORS: Hydraulic research, Oils, Gases, *Hydraulic reservoirs.

Smirnov, A. M.
ÜBER DIE DYNAMISCHEN CHARAKTERISTIKEN HYDRAULISCHER VERBINDUNGEN (On the Dynamic Characteristics of Hydraulic Couplings). 5p. (text in German).
Order from T. I. B. $1.40

#Trans. of Avtomatika i Telemekhanika (USSR) 1960, v. 21, no. 9, p. 1306-1310.

DESCRIPTORS: *Hydraulic couplings, *Dynamics.

Troskolanskii, Adam Tadeusz.
HYDROMETRY: THEORY AND PRACTICE OF HYDRAULIC MEASUREMENTS, REV. ED., tr. by J. Bertholdi and others. 1961, 684p.
Order from PP $18.00

Trans. of unidentified Polish mono., rev. ed., n. p., 1960,

DESCRIPTORS: *Hydraulic research, Hydraulic systems, Water supplies, Measurement, *Density sensitive indicators.

METALLURGY

Bel'chuk, G. A., Gluskin, D. Ya., and Federev, N. A.
THE WELDING OF ALUMINUM AND ITS ALLOYS TO STEEL. Feb 62.
Order from MT £1 1s MT Trans-201

Trans. from Korablestroitel'nyi Institut. Trudy (USSR) [1959] v. 29.

DESCRIPTORS: *Aluminum, *Aluminum alloys, *Steel, *Welding.

Berezhkovskiĭ, D. I.
EEN NIEUWE METHODE TER BEPALING VAN DE SMEEDBAARHEID VAN METALEN (Novyĭ Metod Opredeleniya Kovkosti Metallov) (New Method for the Determination of the Malleability of Metals) tr. by W. R. Filet. 1960. 8p. (foreign text included) 2 refs. (text in Dutch).
Order from OTS or ETC $1.55 62-26066

Trans. of Zavodskaya Laboratoriya (USSR) 1958, v. 24, no. 7, p. 858-860.
Other translations are available in English from LC or SLA mi$1.80, ph$1.80 as 59-22739, DSIR LLU M.641; from HB $2.90 as HB-4439, and from PS $5.00

DESCRIPTORS: *Metals, Castings, *Forging, High temperature research.

Bischof, Friedrich.
NITROGEN ABSORPTION DURING ELECTRIC ARC WELDING. [1960] [24]p. 15 refs.
Order from SLA $2.60 62-14171

Trans. of die Technik (Germany) 1949, v. 4, no. 5, p. 229-234.

Another trans. is available from BISI £4 10s as BISI-1556 [1960].

DESCRIPTORS: *Nitrogen, Absorption, *Arc welding, *Electric welding, Manganese alloys, Nickel alloys, Chromium alloys, Wire.

For abstract see Technical Translations 3: 585, 1960.

Bockstiegel, G[erhard].
NATURE AND CAUSES OF VOLUME CHANGES IN THE SINTERING OF IRON-COPPER AND IRON-COPPER-GRAPHITE POWDER COMPACTS. PT. I. [Erscheinungsbild und Ursachen von Volumenänderungen beim Sintern von Presslingen aus Eisen-Kupfer und Eisen-Kupfer-Graphit-Pulvermischengen. I.] Apr 62, 6000 words.
Order from HB $12.00 HB-5375

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 17, p. 1187-1196 [Verein Deutscher Eisenhüttenleute (West Germany). Berichte-36].
Another trans. is available from SLA $6.60 in 61-20075 [1961] [66]p.

DESCRIPTORS: *Powder metallurgy, Metal powders, Mixtures, *Iron, *Copper, *Graphite, *Sintering, Temperature, Density, Volume, Metallurgy.

Bol'shutkin, D. N., Gavranek, V. V., and Fuks, M. Ya.
RÖNTGENOGRAPHISCHE UNTERSUCHUNG DER KAVITATIONSEROSION DER METALLE (Radiographic Investigation of Cavitation Erosion in Metals). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 9 [no. 5] p. 722-725.

DESCRIPTORS: *Cavitation, *Metals, *Radiographic analysis.

Daeves, K.
AN ATTEMPT TO EXPLAIN THE GOOD PRESERVATION OF OLD TYPES OF IRON. Feb 62.
Order from MT £2 2s MT Trans-206

Trans. of die Naturwissenschaften (Germany) 1935, v. 23, p. 653-656.

DESCRIPTORS: *Iron, Preservation.

Delbart, G.
THE PRINCIPAL USES OF BLAST FURNACE SLAG. Apr 62.
Order from BISI £5 BISI-2615

Trans. of Rev[ue de] Mét[allurgie] (France) 1961, v. 58 [no. 9] p. 723-734.

DESCRIPTORS: *Blast furnaces, *Slags, Quality control.

Fishlock, D. J.
OBERFLÄCHENBEHANDLUNG VON WERKSTÜCKEN IN TROMMELN (Machining in Barrels). 22p. 7 refs. (text in German).
Order from OTS or ETC $1.89 62-26009

Trans. of Metal Industry (Gt. Brit.) 1959, v. 95, no. 3, p. 55-57, 65; no. 4, p. 79-81; no. 5, p. 95-97

DESCRIPTORS: Rotation, Tumbling, *Castings, *Metal polishes, Vibration, Surfaces.

Frantsevich, I. N. and Voĭtovich, R. F.
OXYDATION SCHWERSCHMELZENDER LEGIERUNGEN BEI HOHEN TEMPERATUREN. I. WOLFRAM-TITAN-LEGIERUNGEN (The High Temperature Oxidation of High Melting Point Alloys. I. Alloys of Tungsten with Titanium). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 10, no. 6, p. 857-861.

DESCRIPTORS: Heat resistant alloys, *Tungsten alloys, *Titanium alloys, *Oxidation, High temperature research.

Frenkel', A. B.
HEAT TREATMENT OF COLD-HEADING DIES. Apr 62.
Order from HB $2.00 HB-5405

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 5, p. 55-57.

DESCRIPTORS: *Dies, Heat treatment, Manufacturing methods.

Frolov, D. Sh.
LENGTH CHANGES OF MAGNESIUM-INOCULATED CAST IRON DURING ANNEALING AND NORMALIZING. Apr 62.
Order from HB $2.00 HB-5401

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 5, p. 45-48.

DESCRIPTORS: *Cast iron, Iron, *Magnesium.

Funke, P., Jr. and Lueg, W.
EXAMINATION OF THE OPERATION OF A HOT STRIP MILL WITH A STECKEL-TYPE REVERSING STAND. Mar 62.
Order from BISI £5 5s BISI-2577

Trans. of Stahl [und] Eisen (West Germany) 1961, v. 81, 9 Nov, p. 1510-1519.

DESCRIPTORS: *Rolling mills, *Steel, Design, Operation.

Geguzin, Ya. E.
UNTERSUCHUNG UBER DAS KRIECHEN VON METALL UND LEGIERUNGEN. II. EINFLUSS EINER ENTSPANNUNG AUF DEN ANFANGSABSCHNITT VON METALLEN MIT VERZERRTEM GITTER (Investigation of the Creep of Metals and Alloys. II. Influence of the Removal of Defects on the Kinetics of the Initial Stage of the Creep of Metals with a Deformed Crystal Lattice). (Text in German).
Order from T.I.B. $1.85

Trans. of Fizika Metallov i Metallovedenie (USSR) 1958, v. 6, no. 5, p. 825-831.

DESCRIPTORS: *Metals, Alloys, *Copper, *Deformation, *Creep, Lattices.

Glazov, V. V. and Kurnakov, N. N.
OM FRAMSTÄLLNINGSMETODER AV LEGERINGAR PÅ TITAN- OCH ZIRKONIUMBASIS FÖR UNDERSÖKNING AV TILLSTÅNDSDIAGRAM (Preparing Alloys Containing Titanium and Zirconium for Phase Diagram Studies). 10p. 11 refs.
Order from OTS or ETC $1.55 62-26005

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i Toplivo, 1960, no. 4, p. 81-84.

DESCRIPTORS: *Titanium alloys, *Zirconium alloys, *Phase studies, Induction heating, Hardness, Refractory materials.

Gluchov, D. P.
DAS GIESSEN VON KOLBENRINGEN AUS DEM KUPOLOFEN UND IM DUPLEX-VERFAHREN (Casting of Piston Rings from the Cupola and in the Duplex Method) 11p. 3 refs. (text in German).
Order from OTS or ETC $1.55 62-26006

Trans. of Liteinoe Proizvodstvo (USSR) 1960, no. 11, p. 33-34.

DESCRIPTORS: *Piston rings, *Casting, Cupola furnaces.

Gusev, V. V.
IMPROVING THE DURABILITY OF PERMANENT MOLDS. [1962] 13p.
Order from ATS $19.85 ATS-38N58R

Trans. of Liteinoe Proizvodstvo (USSR) 1961, no. 1, p. 43-48.

DESCRIPTORS: *Castings, *Molding

Heller, P. A.
CENTRIFUGAL CASTING: PRODUCTION, PROPERTIES, RANGE OF APPLICATIONS. Apr 62.
Order from BISI £2 10s BISI-2715

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (West Germany) [1951] v. 93, no. 35, p. 1098-1100.

DESCRIPTORS: *Castings, Production.

Horn, W.
THE USE OF TAR-BONDED MIXTURE FOR TAP-HOLE STOPPING AND OF THE REMOTE CONTROLLED TAPHOLE DRILLING MACHINE IN BLAST FURNACE OPERATION (WITH DISCUSSION). Feb 62.
Order from BISI £4 10s BISI-2554

Trans. of Stahl [und] Eisen (West Germany) 1961, v. 81, 9 Nov, p. 1497-1502.

DESCRIPTORS: *Blast furnaces, *Drilling machines, *Coal tar, Bonding, Mixtures, Remote control systems.

Korobov, I. I., Golbetzand, S. B., and Ivanov, E. V.
THE EFFECT OF SLAG PRACTICE ON THE BASIC LINING OF OXYGEN BLOWN CONVERTERS. Mar 62.
Order from BISI £3 10s BISI-2556

Trans. of Ogneupory (USSR) 1959, v. 24, no. 11, p. 510-517.

DESCRIPTORS: *Slags, Blast furnaces, *Combustion chamber liners, Refractory materials.

Krivonosov, V. A. and Sharov, S. I.
THE KINETICS OF SULPHUR TRANSFER FROM IRON TO SLAGS OF THE BLAST FURNACE TYPE [Kinetika Perekhoda Sery iz Chuguna v Shlaki Domennogo Tipa]. May 62.
Order from BISI £2 15s BISI-2091

Trans. of Nauchnye Doklady Vysshei Shkoly. Metallurgiya (USSR) 1958, no. 4, p. 28-33.

DESCRIPTORS: *Iron, *Desulfurization, *Slags, Blast furnaces, Sulfur, Metallurgy, Melting.

Lebedev, R. S. and Postnikov, V. S.
EINFLUSS DER BILDSAMEN VERFORMUNG AUF DIE INNERE REIBUNG DES EISENS UND DER EISEN-NIKKEL-LEGIERUNGEN (The Influence of Plastic Deformation on Internal Friction in Iron and in Iron-nickel Alloy). (text in German).
Order from T.I.B. $1.55

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 2, p. 310-314.

DESCRIPTORS: *Iron alloys, *Internal friction, Deformation, Nickel alloys, Plastic flow.

Lehmann, J. and Aubat, H.
GRAIN REFINING OF URANIUM [Affinage du Grain de l'Uranium] tr. by Liz Appleby. 2 Apr 59, [17]p.
Order from OTS or SLA $1.60 HW-TR-1

Trans. of R[evue] de Métallurgie (France) 1958, v. 55, Dec, p. 1188-1194.

DESCRIPTORS: *Uranium, Uranium alloys, Aluminum alloys, Alloys, *Grains (Metallurgy), Phase studies, Transformations, Deformations, Nucleation, Heat treatment, Reactor fuels, Fuel rods, Materials.

Lersmacher, B. and Scholz, S.
PRESSURE SINTERING OF HAFNIUM, ZIRCONIUM AND TANTALUM CARBIDES WITHOUT BINDER. Apr 62, 6200 words.
Order from HB $17.50 HB-5246

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1961, v. 32, no. 6, p. 421-429.

DESCRIPTORS: *Hafnium compounds, *Zirconium compounds, *Tantalum compounds, *Carbides, *Sintering, Pressure, Binders.

Linder, R.
THERMOCHEMICAL CALCULATIONS OF THE BLAST FURNACE PROCESS. Nov 61.
Order from MT £15 MT Trans-205

Trans. of Jernkontoret, Stockholm. Annaler (Sweden) 1960, v. 144, no. 12, p. 859-967.

DESCRIPTORS: *Metallurgy, *Thermochemistry, Iron, Processing, *Blast furnaces, Mathematical analysis.

Nam, B. P., Oiks, G. N. and others.
EFFECT OF HYDROGEN IN OPEN-HEARTH FINISHING SLAG UPON HYDROGEN CONTENT OF STEEL DURING TAPPING AND POURING. Apr 62, 1500 words.
Order from HB $3.90 HB-5439

Trans. of Izvest[iya] V[ysshikh] U[chebnykh] Z[avedenii]. Chern[aya] Met[allurgiya] (USSR) 1961, no. 9, p. 54-58.

DESCRIPTORS: *Steel, Processing, *Open hearth furnaces, *Hydrogen, *Slags.

Neunzig, H.
THE PRESENT STATE OF THE POLISH ANODIZING OF ALUMINIUM. May 62.
Order from BISI £1 10s BISI-2651

Trans. of Forschungsgesellschaft Blechverarbeitung e.V. Mitteilungen (Germany) 1961, no. 17, p. 223-226.

DESCRIPTORS: *Aluminum, *Electrolytic polishing

Okamoto, G. and Sato, N.
A CONTRIBUTION TO EXPERIMENTAL METHODS FOR KINETIC STUDY OF THE ANODIC FORMATION OF THIN OXIDE FILMS ON METALS: KINETICS OF ANODIC FORMATION OF PASSIVE OXIDE FILMS ON NICKEL. [1962] 9p.
Order from ATS $15.80 ATS-41P59J

Trans. of Nihon Kinzoku Gakkai-Shi (Japan) 1960, v. 24, no. 2, p. 130-134.

DESCRIPTORS: *Metals, *Thin films, *Oxides, *Anodes(Electrolytic cell), *Nickel, Films, Passivity.

Okunev, A. I.
ON EXPEDIENCY OF SEPARATING TUYERES, WHEN FUMING SLAGS, FOR HEATING AND REDUCING PURPOSES (O Tselesoobraznosti Razdeleniya Furm na Nagrevatel'nye i Vosstanovitel'nye Pri F'yumingovanii Shlakov). Dec 61 [7]p. 5 refs.
RTS 1783.
Order from OTS or SLA $1.10 62-13725

Trans. of Uralsk[ii] Nauchno-Issled[ovatel'skii i] Proekt[nyi] Inst[itut] Medn[oi] Prom[yshlennosti]. Tr[udy i] Mater[ialy] (USSR) 1957, v. 2, p. 316-321.

DESCRIPTORS: *Blast furnaces, *Slags, Heating, Reduction.

Revinov, V. N.
DEEP COOLING WHEN DEEP-DRAWING PARTS FROM HEAT-RESISTANT METAL SHEETS. Paper presented at Conference on Heat Resisting Alloys [held in] Moscow, Dec 57, [1962].
Order from BISI £ 3 15s BISI-2552

Trans. of mono. Obrabotka Zharoprochnykh Splavov (The Working of Heat-resisting Alloys) Moscow, 1960, p. 53-58.

DESCRIPTORS: *Heat resistant alloys, Sheets, Cooling, Drawing (Machine processing).

Rodin, A. M. and Surenyants, V. V.
DER DIFFUSIONSKOEFFIZIENT DES HELIUMS IN TITAN (Coefficient of Diffusion of Helium in Titanium) 11p. (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 10, no. 2, p. 216-222.

DESCRIPTORS: *Diffusion, *Helium, *Titanium, Rare gases, Metals.

Rudakov, L. M. and Gorshtein, I. I.
EFFECT OF HANDLING OPERATIONS ON THE CHANGE IN THE PARTICLE SIZE DISTRIBUTION OF SINTER. Feb 62.
Order from MT # 2 MT Trans-194

Trans. of #Metallurg (USSR) 1961, v. 6, no. 4, p. 4-6.

Another trans. is available from BISI # 1 15s as BISI-2457, Oct 61.

DESCRIPTORS: *Sinters, Handling, Grains

Samsonov, G. V., Yasinskaya, G. A., and Shiller, E. A.
THE REACTION OF CERTAIN OXIDES AND CARBIDES WITH REFRACTORY METALS AT HIGH TEMPERATURES. 6 Oct 61 [9]p. 7 refs.
FTD-TT-61-74; AD-265 808.
Order from OTS or SLA $1.10 62-23378

Trans. of Ogneupory (USSR) 1961 [v. 26] no. 7, p. 335-338.

DESCRIPTORS: High temperature research, Chemical reactions, *Oxides, Beryllium compounds, Magnesium compounds, Dioxides, Zirconium compounds, *Carbides, Zirconium compounds, Hafnium compounds, Niobium compounds, Tantalum compounds, Refractory materials, Metals, Niobium, Molybdenum, Tungsten.
Results are presented of an investigation of the contact reaction of BeO, MgO, ZrO_2, and metal carbides (Zr, Hf, Nb, and Ta) with Nb, Mo, and W at temperatures up to 2100 C. Oxides of chemically pure Be and Mg and ZrO_2 stabilized with CaO, ZrC, HfC, NbC and TaC of stoichiometric composition, and also industrially pure refractory metals were used. An oxide or carbide was pressed, after heating for 3 to 5 min on a hot forging press, onto a refractory metal sample. The products obtained were kept in a vacuum furnace with a graphite heater at temperatures from 1000 to 1600 to 2100 C for 0.5 to 5 hr. After extraction the ends were ground, polished, and examined metallographically. Tungsten had the greatest stability with BeO, Mo and W with Mgo, and Mo with stabilized ZrO_2. (ASTIA abstract)

Schenck, H. and Domalski, H.-H.
INVESTIGATION OF THE DISTILLATION OF METALLIC ELEMENTS FROM LIQUID IRON UNDER REDUCED PRESSURE. [1962] 17p.
Order from ATS $23.45 ATS-55P59G

Trans. of Arch[iv für das] Eisenhüttenw[esen] (West Germany) 1961, v. 32, no. 11, p. 753-760.

DESCRIPTORS: *Distilling plants, *Liquid metals, *Iron, Pressure, Reduction.

Snitkovskii, M. M. and Silaev, I. I.
MICROHARDNESS CHANGES OF INCLUSIONS OF PHOSPHORUS COMPOUNDS IN GRAY IRONS BETWEEN 20 AND 300°C. Apr 62.
Order from HB $3.50 HB-5400

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 5, p. 42-45.

DESCRIPTORS: *Cast iron, Iron, *Phosphorus compounds, Temperature, *Hardness.

Storozhnik, A. A.
HYDRAULIC SEAL OF THE CHARGE DISTRIBUTOR WHEN WORKING AT ELEVATED TOP PRESSURE. Mar 62.
Order from BISI £2 5s BISI-2238

Trans. of Stal' (USSR) 1956 [v. 16] no. 4, p. 367-368.

DESCRIPTORS: *Hydraulic seals, Distributors, Pressure.

Strunin, B. M.
ÜBER DIE INHOMOGENITÄT DER PLASTISCHEN VERFORMUNG BEIM ZUGVORGANG (The Heterogenity of Plastic Deformation in Tension). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 9, no. 5, p. 751-757.

DESCRIPTORS: *Metals, *Deformation, Tensile properties, Plastic flow.

Voltovich, R. F.
OXYDATION SCHWERSCHMELZENDER LEGIERUNGEN BEI HOHEN TEMPERATUREN. II. WOLFRAM-ZIRKON-LEGIERUNGEN (The High Temperature Oxidation of High Melting Point Alloys. II. Alloys of Tungsten with Zirconium). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 10, no. 6, p. 862-865.
An unedited rough draft trans. is available in English from OTS or SLA $1.10 as 61-27439, MCL-951, 27 June 61 [6]p.

DESCRIPTORS: Heat resistant alloys, *Tungsten alloys, *Zirconium alloys, *Oxidation, High temperature research.

Wladika, H.
PLANNING A SEMI-CONTINUOUS WIDE HOT STRIP MILL, AND EXPERIENCE GAINED DURING ITS OPERATION. Mar 62.
Order from BISI £7 BISI-2580

Trans. of Stahl [und] Eisen (West Germany) 1961, v. 81, 23 Nov, p. 1599-1609.

DESCRIPTORS: *Rolling mills, Construction, Operation, *Steel.

Zusman, S. I.
ANOMALIEN DER MAGNETISCHEN EIGENSCHAFTEN VON EISEN-ALUMINIUMLEGIERUNGEN BEI ERHÖHTEN TEMPERATUREN (Anomalies in the Magnetic Properties of Fe-Al Alloys at High Temperatures). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 9, no. 1, p. 41-47.

DESCRIPTORS: *Iron alloys, Aluminium alloys, *Magnetic properties, *High temperature research.

Amonenko, V. M., Shapoval, B. I., and Lebedev, V. V.
TEMPERATURABHÄNGIGKEIT DER INNEREN REIBUNG UND DES ELÄSTIZITÄTSMODULS VON REINSTEISEN (Temperature Dependence of Internal Friction and Coefficients of Elasticity in Pure Iron). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, [v. 8], no. 2, p. 249-254.

DESCRIPTORS: *Iron alloys, *Internal friction, *Elasticity, Temperature.

Arski, V. N.
DIE NATUR DER MARTENSITUMWANDLUNG (Microkinetics of the Martensitic Transformation). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1958, v. 6, [no. 3] p. 496-504.

DESCRIPTORS: *Transformations, *Martensite, Oscillograms.

Belikov, A. N.
INCREASING THE SCALING RESISTANCE AND HOT STRENGTH OF STEEL PARTS (BY FIRE ENAMELING). Apr 62.
Order from HB $2.00 HB-5404

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 5, p. 54-55.

DESCRIPTORS: *Steel, *Scale, *Enamel coatings, Temperature, *Refractory coatings

Bergh, S. and Josefsson, A.
SIMPLIFIED ELECTROLYTIC METHOD FOR THE EXTRACTION OF NON-METALLIC INCLUSIONS. Feb 62, 2700 words.
Order from HB $4.80 HB-5424

Trans. of Stahl und Eisen (West Germany) 1961, v. 81, no. 24, p. 1693-1696 (condensation of Jernkontoret [Stockholm]. Annaler (Sweden) 1961, v. 145, no. 8, p. 551-560).

DESCRIPTORS: *Steel, *Impurities, *Separation, *Electrolytic cells, Particles, Slags.

Bogdandy, Ludwig von, Schmolke, Rudolf, and Winzer, Gerhard.
CONDITIONS FOR SMELTING PURE IRON (Bedingungen für das Erschmelzen von Reineisen). 1960, 14p. 21 refs. N R L Trans. no. 782.
Order from OTS or SLA $1.60 60-21176

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1958, v. 29, no. 4, p. 231-234.

DESCRIPTORS: *Iron, Smelting, Surface tension, Vacuum systems, Crucibles, Dissociation, Chemical equilibrium, Oxygen, Carbon, Separation.

According to thermodynamic calculations, an absorption of oxygen from all crucible materials, with the exception of ZrO_2 and ThO_2, is to be expected in smelting pure iron with a maximum carbon and oxygen content of 0.002% each. However, through measurement of the surface tension of pure iron smelted on pressed forms which had been sintered in air or in a vacuum and which were made of the materials usually used in crucibles, such as MgO, CaO, Al_2O_3, ZrO_2, and dolomite, it was found that, with appropriate preparation of the pressed forms, the oxygen release of the refractory crucible material into the molten iron did not exceed 1.5×10^{-4} g per hour per square centimeter of contact area between the crucible and the melt, and thus was very small. Therefore, for smelting good quality steel types in vacuum one may select the crucible material which may be processed the most economically. Smelting experiments in a vacuum furnace of 10 kg iron capacity verified these conclusions. (Author)

Bungardt, K., Lennartz, G., and Wetzlar, K.
THE EFFECT OF THE DEGREE OF STABILIZATION ON THE PRECIPITATION PROCESSES IN AUSTENITIC CHROMIUM-NICKEL AND CHROMIUM-NICKEL-MOLYBDENUM STEELS CONTAINING NIOBIUM. [1962] [14]p. 20 refs.
Order from SLA $1.60 62-14317

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1959, v. 30 [no. 7] p. 429-434.
Another trans. is available from BISI £4 10s as BISI-1438, 1959.

DESCRIPTORS: *Steel, Niobium alloys, Molybdenum alloys, Nickel alloys, Chromium alloys, *Intermetallic compounds, Stabilization, Precipitation.

Chekmarev, A. P. and Gulaev, G. I.
ROLL DESIGN FOR REDUCING AND SIZING MILLS. Mar 62.
Order from BISI £5 10s BISI-1041

Trans. of Stal' (USSR) 1958 [v. 18] Rolling and Tube Manufacture Suppl, p. 276-294.

DESCRIPTORS: *Rolling mills, *Stainless steel, Steel tubing.

Doroshek, S. I. and Druzhinin, V. V.
ZUSAMMENSETZUNG DER SPEZIFISCHEN VERLUSTE UND DER MAGNETISCHEN DURCHLÄSSIGKEIT VON MIT PHOSPHOR LEGIERTEM DYNAMOSTAHL (The Components of Specific Loss and Magnetic Permeability of Dynamo Steels Alloyed with Phosphorus). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 6, p. 892-895.

DESCRIPTORS: *Steel, Magnetic properties, *Permeability, *Phosphorus alloys, Hysteresis, Dynamotors.

Dubrov, N. F.
WARMGEWALZTER TRANSFORMATORENSTAHL MIT GERINGEN SPEZIFISCHEN VERLUSTEN (Hot-rolled Transformer Steel with Low Specific Losses). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 5, p. 752-757.

DESCRIPTORS: *Steel, Grains, *Metallurgical analysis, Transformers.

Erlikh, L. B.
MECHANISMUS DER BILDUNG VON LÜDERSCHEN LINIEN (On the Formation of Lüders lines). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1960, v. 9, no. 1, p. 57-61.

DESCRIPTORS: *Steel, *Tensile properties, Stresses, *Surfaces.

Funke, Paul Jr. and Lueg, Werner.
INFLUENCE OF AGEING ON THE PRECIPITATION PHENOMENA OCCURING IN TEMPER-ROLLED SHEETS MADE OF DEEP-DRAWING STEEL. [1962] [48]p. 27 refs.
Order from SLA $4.60 62-14652

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 20, p. 1398-1411 Max Planck Institut [für Eisenforschung] (West Germany). [Communication]-826; [Verein Deutscher Eisenhüttenleute] (West Germany). [Berichte]-59.
Another trans. is available from BISI as BISI-1561 [1960].

DESCRIPTORS: *Steel, Sheets, Precipitation, Aging, Heat treatment, Deformation, Dislocations. Tests.

Gräfen, Hubert.
THE INFLUENCE OF COVERING LAYERS ON THE STRESS CORROSION CRACKING IN STEEL (Einfluss von Deckschichten auf die Spannungsrisskorrosion von Stahl). 1960, 14p. 6 refs. N R L Trans. no. 777.
Order from OTS or SLA $1.60 60-21072

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1958, v. 29, no. 4, p. 225-229.

DESCRIPTORS: *Steel, Steel alloys, Alloys, Corrosion, Corrosion inhibition, Coatings, *Stresses, Fracture (Mechanics), Oxidizers, Effectiveness, *Corrosion research.

In unalloyed and low-alloyed steels treated with moderate oxidizing agents, a high potential drop arose between grain planes passivated through the formation of oxide films and grain boundaries strongly activated

through an energy increase resulting from applied tensile force, which leads to intercrystalline tension crack corrosion. While disturbance of the oxide coat formation by halides leads to an increase in the anodal surface and thereby to retardation of the attack of the test sample, improvement of the passivating film and accelerated building-up of the coating, for example through the addition of small amounts of bichromate to a nitrate solution corrosive agent, increase the cracking rate. Strong oxidizing agents which passivate the total surface of the steel even when the steel is under tensile stress, hinder tension crack corrosion. Austenitic chrome-nickel steels, which have a natural passivating film, exhibit transcrystalline tension crack corrosion when exposed to attacking agents which cause selective activation, such as halides. Thus the cracking rate may be altered through the addition of oxidizing agents to the attacking solution. Austenitic steel completely free from its passive skin (activation in hydrochloric acid) exhibits no susceptibility to tension fault corrosion: this appears only when the possibility for passivation is restored. (Author)

Hrivnak, Ivan.
MODIFICATION OF CARBON EXTRACTION REPLICAS FOR AUSTENITIC STEELS. [1962] [8]p. 3 refs.
Order from SLA $1.10 62-14185

Trans. of Hutnicke Listy (Czechoslovakia) 1959, v. 14, no. 3, p. 211-214.
Other translations are available from MT, Jan 60 and from BISI £4 15s as BISI-1508, 1960.

DESCRIPTORS: *Steel, Processing, *Carbon, Separation, Austenite, Chromium, Nickel.

For abstract see Technical Translations 3: 319, 1960.

Izbranov, P. D., Pavlov, V. A., and Rodigin, N. M.
EINIGE BESONDERHEITEN DER REKRISTALLISATION VON TRANSFORMATORSTAHL BEI SCHNELLEM ERWÄRMEN (Some Features of the Recrystallization of Transformer Steel during Rapid Heating). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 4, p. 607-612.

DESCRIPTORS: *Steel, *Crystallization, Grains, Heating, Transformers.

Karpenko, G. V. and Kripyakevich, R. I.
EINFLUSS DER WASSERSTOFFAUFNAHME WÄHREND DER VERFORMUNG AUF DIE MECHANISCHEN EIGENSCHAFTEN DES STAHLES (The Effect of Hydrogen Adsorption in the Process of Deformation of Steel on its Mechanical Properties). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 1, p. 91-94.

DESCRIPTORS: *Steel, Deformation, *Mechanical properties, *Hydrogen, Adsorption.

Kasatkin, B. S.
VORGANG DES SPRÖDBRUCHES VON STAHL BEI SCHLAGBIEGUNG GEKERBTER PROBESTÄBE (Mechanizm of Brittle Fracture in Steel in a Notched Bar Impact Bending Test). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 1, p. 75-84.

DESCRIPTORS: *Steel, *Deformation, Fracture (Mechanics), Brittle materials.

Koch, Walter, Malissa, Hanns, and Ditges, Dagmar.
MICROANALYTIC INVESTIGATIONS IN IRON RESEARCH. III. MANIPULATION OF MICROGRAM QUANTITIES IN METALLOGRAPHIC INVESTIGATIONS (Mikroanalytische Untersuchungen in der Eisenforschung. III. Handhabung von Mikrogrammengen bei Metallkundlichen Untersuchungen) trans. ed. by A. Pingell. 1959 [28]p. 9 refs. N R L Trans. no. 768.
Order from OTS or SLA $2.60 60-21039

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1957, v. 28, no. 12, p. 785-794.
Another trans. is available from SLA $1.60 as 61-16314 [1958] [18]p.

DESCRIPTORS: *Iron alloys, Steel, *Metallurgical analysis, *Microanalysis, Stereoscopes, Microscopes, Quality control, Handling, Instrumentation.

König, G.
SIMPLE METHOD OF ISOLATION OF THIN NONMETALLIC COATINGS. Apr 62, 2400 words.
Order from HB $5.85 HB-5412

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1961, v. 32, no. 10, p. 729-731.

DESCRIPTORS: *Steel, Impurities, Separation, Coatings.

Kontorovich, I. E. and Voshedchenko, B. M.
EINFLUSS EINER ÜBERHITZUNG AUF DIE EIGENSCHAFTEN VON CHROM-NICKEL-STÄHLEN NACH DEM VERGÜTEN (The Effect of Overheating on the Properties of Heat Treated Structural Steels). (text in German).
Order from T.I.B. $1.85

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1957, v. 5, no. 2, p. 340-348.

DESCRIPTORS: *Steel, Austenite, Grains, *Metallurgical analysis, Mechanical properties, Heat resistant alloys, Chromium alloys, Nickel alloys.

Küntscher, Wolfgang.
DEVELOPMENT OF THE METALLURGICAL INDUSTRY IN THE PEOPLE'S REPUBLIC OF CHINA (Entwicklung der Metallurgischen Industrie in China). 2 Nov 60 [8]p. JPRS: 5906.
Original copy poor quality; available on loan from OTS or SLA 60-41662

Trans. of Neue Hütte (East Germany) 1960, v. 5, no. 3, p. 123-127.

DESCRIPTORS: *Metallurgy, Industrial plants, *China, Cast iron, Steel, Production.

Kuroda, M.
STRUCTURE AND ROLLING FATIGUE PROPERTIES OF BEARING STEEL. [1962] 18p.
Order from ATS $29.90 ATS-52P59J

Trans. of Nihon Kikai Gakkai-shi (Japan) 1960, v. 63, no. 502, p. 1442-1451.

DESCRIPTORS: *Steel, *Bearings, *Fatigue (Mechanics)

Lyashenko, S. V.
GAS CARBURIZING OF TRACTOR PARTS IN FIXTURES. Apr 62.
Order from HB $2.00 HB-5406

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 5, p. 57-58.

DESCRIPTORS: *Drive shafts, *Tractors, Gears, Vehicles, Carbon, *Steel, *Impregnation

Mikheev, M. N. and Tomilov, G. S.
ZUR FRAGE DES ANOMALEN VERHALTENS DER KOERZITIVKRAFT DER GEHÄRTETEN UND HOCH ANGELASSENEN STÄHLE (On the Problem of Anomalous Behaviour of the Coercive Force of Quenched and Highly Annealed Steels). (text in German)
Order from T.I.B. $1.55

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1959, v. 8, no. 3, p. 346-348.

DESCRIPTORS: *Steel, *Magnetic properties, Mechanical properties.

Moroz, I. I. and Kudryavtsev, N. T.
THE INFLUENCE OF ELECTROPLATING WITH ZINC ON THE MECHANICAL PROPERTIES OF STEEL (Vluyanie Elektroliticheskogo Tsinkovaniya na Mekhanicheskie Svoistva Stali). 6p. RTS: 1136. MTWL: 1091
Order from OTS or ETC $1.55 62-26048

Trans. of pre-print of Vsesoyuznoe Nauchno-Tekhnicheskoe Soveshchaniya po Korrozii i Zashchite Metallov [Moscow] 19-24 Maya 58. Programma, sect. 4, p. 43-44.
Another trans. is available from LC or SLA mi$1.80 ph$1.80 as 60-13463, RTS-1136, Dec 59 [7]p.

DESCRIPTORS: *Electroplating, *Steel, *Zinc coatings, Mechanical properties, *Hydrogen, Absorption, Brittle materials.

Myslivec, T., Cadek, J. and others.
IDENTIFICATION OF THE ORIGIN OF NON-METALLIC INCLUSIONS IN STEEL BY MEANS OF THE RADIOACTIVE ISOTOPE Ca^{45} (AN ABRIDGED VERSION OF THE JOINT REPORT OF THE CZECHOSLOVAK STATE RESEARCH INSTITUTES IN OSTRAVA AND PRAGUE). Feb 62.
Order from MT £ 11 MT Trans-178

Trans. of Hutnicke Listy (Czechoslovakia) 1961, v. 16, no. 2, p. 94-102.

DESCRIPTORS: *Steel, *Impurities, *Radioactive isotopes, *Calcium.

Nacken, Matthias and Sturies, Herbert.
CONTRIBUTION TO KNOWLEDGE ON THE CHILL-AGING OF SOFT UNALLOYED STEELS, PRIMARILY FROM OBSERVATIONS OF REGENERATION (Beitrag zur Kenntnis der Abschreckalterung Weicher Unlegierter Stahle, vor Allem aus Beobachtungen der Rückbildung). 1960, 18p. 27 refs. N R L Trans. no. 778.
Order from OTS or SLA $1.60 60-21071

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1958, v. 29, no. 4, p. 235-240.

DESCRIPTORS: *Steel, Aging, Temperature, Regeneration, Precipitation, Damping, Measurement, Carbon, Reduction, Iron.

Pitsch, W.
ON THE PARTICLE SHAPE OF CARBIDE PRECIPITATED FROM ALPHA-IRON. [1962] [4]p. 2 figs. omitted) 4 refs.
Order from SLA $1.10 62-14562

Trans. of Acta Metallurgica (U. S.) 1957, v. 5, no. 3, p. 175-176.

DESCRIPTORS: *Iron, *Carbides, Particles, Precipitation.

Pogrebnoi, E. N. and Taran, Yu. N.
EFFECT OF QUENCHING ON GRAPHITIZATION OF CAST IRON AND STEEL. Apr 62.
Order from HB $2.75 HB-5402

Trans. of Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 5, p. 48-52.

DESCRIPTORS: *Cast iron, Iron, *Steel, Graphite.

Ravizza, P. and Giacomazzi, V.
THE SOLIDIFICATION OF STEEL INGOTS UNDER THE INFLUENCE OF A BASE COOLED BY WATER RECYCLING. [1962] 11p. (12 figs. refs. omitted).
Order from SLA $1.60 62-14425

Trans. of Revue de Métallurgie (France) 1961, v. 58, no. 8, p. 655-[660].

DESCRIPTORS: *Steel castings, Crystal structure, Liquid metals, *Cooling, *Water.

This work studies the development of isothermal solidification surfaces under the cooling action of the mold walls and the mold stool as well as the effect proclaimed by the use of a stool cooled by circulating water. This latter method accelerates solidification beginning with the bottom of the ingot; improves the crystalline structure; and reduces the total time of solidification thereby avoiding the possible sealing off of the feedhead while the axis of the ingot is still liquid. The work was conducted on experimental ingots weighing 110 lb and 660 lb, and on regular production ingots weighing 6,600 lb. The results, conclusions, and possible applications of this process are discussed in simple form with the aid of diagrams. (Author)

Sugazawa, K. and others.
VACUUM CASTING OF STEEL INGOTS. Dec 61.
Order from BISI £4 5s BISI-2500

Trans. of Sumitomo Kinzoku (Japan) 1959, v. 11, no. 4, p. 252-260.

DESCRIPTORS: *Steel, *Casting, Steel castings, Hydrogen, Oxygen. Nitrogen, Separation.

Verte, L. A.
ELEKTROMAGNETISCHE RINNE ZUR BEFÖRDERUNG VON FLÜSSIGEM GUSSEISEN (Electromagnetic Casting-gutter for Transportation of Liquid Cast Iron). 20p. (text in German).
Order from OTS or ETC $1.85 62-26001

Trans. of Sredstva Mekhanizatsii i Avtomatizatsii (USSR) 1961, no. 8.

DESCRIPTORS: *Cast iron, *Liquid metals, Fluid flow, Automatic transmissions, *Electromagnetic pumps.

Wartmann, Rolf.
CALCULATION OF THE RE-HEATING PROCESS OF STEEL INGOTS AND COMPARISON WITH RESULTS OF MEASUREMENT. [1962] [20]p. 1 ref.
Order from SLA $1.60 62-14649

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 10, p. 703-711.
Another trans. is available from BISI £5 5s as BISI-1439 [1960]

DESCRIPTORS: *Steel castings, *Cast steel, Heat treatment, Temperature, Transformations, Thermal conductivity, Partial differential equations, Analog computers.

For abstract see Technical Translations 3: 608, 1960.

Nonferrous (except light) Metals

Dubuisson, J., Hongvet, A. and others.
PREPARATION AND SINTERING OF URANIUM UNDER LOAD, tr. by Liz Appleby. 16 July 59 [15]p.
Order from OTS or SLA $1.60 HW-TR-6

Trans. of R[evue] de Métallurgie (France) 1959, v. 56 [no. 1] p. 55-60.

DESCRIPTORS: *Uranium, Powder metallurgy, Sintering, Load distribution, *Metal powders, *Fuel elements, Grains (Metallurgy), Density, Mechanical properties.

Kawasaki, Massayuki, Nagasaki, Ryukichi and others.
STUDIES ON URANIUM-MOLYBDENUM ALLOY. [1961] 27p. 17 refs.
Order from OTS $0.75 AEC-tr-4468

Trans. of Nihon Genshiryoku Gakkaishi (Japan) 1960, v. 2 [no. 3] p. 136-146.

DESCRIPTORS: *Uranium alloys, *Molybdenum alloys, Crucibles, Phase studies, Hardness, Transformations, Stability.

A U-Mo alloy specimen (weight about 1.5 kg, diameter 2-2.5 cm, length about 20 cm) without much segragation was made by the re-melting method by high-frequency vacuum melting alone. When a homemade Al_2O_3 crucible was used, in the case of the alloy of high Mo contents, it was necessary to increase the frequency of re-melting, and there was a trend for an increase in the mixing of impurities owing to the need of maintaining a high temperature for a long time. The gothic and square types of grooves gave favorable results at 600°C in the case of the 3% Mo alloy, and at 900°C in the case of the alloy of higher Mo contents. Primarily on the 1.30% Mo alloy, the effects of quenching phase and the velocity of cooling from the γ-phase were studied in respect of structure, hardness and specific gravity and exposure to X-rays. In the case of the alloy of low Mo contents, tempering resulted in age-hardening; while in the case of the γ-phase alloy, hardness increased with the start of transformation. The dimensional stability of the rolled specimen was improved remarkably by γ-quenching and -annealing. As a result of a high-temperature oxidation test in the air, it was found that the oxidation velocity constant K had the minimum value at a point of a certain Mo content at each oxidation temperature, and this minimum value shifted to the side of lower Mo contents with a rise in oxidation temperature. (Author)

Sella, C. and Trillat, J. J.
INFLUENCE OF THE SURFACE STATE ON SOME PROPERTIES OF URANIUM. [1959] [39]p. 16 refs.
Order from OTS or SLA $3.60 HW-TR-5

Trans. of R[evue] de Metallurgie (France) 1959, v. 56 [no. 2] p. 105-121.

DESCRIPTORS: *Uranium, Surface properties, Oxygen, Chemical reactions, Metals, Diffusion, Crystal structure, Ion bombardment, Metallurgical analysis, Microstructure.

A first part treats the influence of the physico-chemical surface state on the reactivity of uranium with oxygen. The nature of the oxides formed, their crystallographic structure and their texture have been studied in the case of surfaces mechanically or electrolytically polished and oxidized under varied conditions (oxidation in air at different pressures and temperatures - anodic oxidation, and chemical oxidation - oxidation by ion bombardment). Conditions of the formation of the oxide UO_2, amorphous, polycrystalline, or epitactic, are thus formulated. On the whole, ion bombardment with protons or deuterons is revealed as a cleaning process and a very interesting micrographic etch. The second part is dedicated to the study of certain aspects of the diffusion of metals into uranium by a method based on electron diffraction, which lets us demonstrate the role of the surface structure of uranium in the diffusion mechanism. (Extracted)

Structural Metallurgy and Corrosion

Pawera, K., Pilous, V., and Poboril, F.
MICROSTRUCTURE AND MECHANICAL PROPERTIES OF WELDED JOINTS IN AUSTENITIC AND FERRITIC-PEARLITIC CREEP-RESISTANT STEEL FOR BOILERS OPERATING AT HIGH PARAMETERS. Feb 62.
Order from MT MT Trans-188

Trans. of Hutnicke Listy (Czechoslovakia) 1961, v. 16 no. 3, p. 186-197.

DESCRIPTORS: *Welded joints, Microstructure, Mechanical properties, *Steel, Creep, Resistance, *Boilers.

Pritula, V. A.
THE BIOLOGICAL CORROSION OF UNDERGROUND PIPELINES. [1962] 7p.
Order from ATS $9.25 ATS-91P58R

Trans. of Gazovaya Prom[yshlennost'] (USSR) 1961, v. 6, no. 8, p. 46-50.
Another trans. is available from OTS or SLA $1.10 as 62-23454, JPRS-12981, 12 Mar 62 [9]p.

DESCRIPTORS: *Pipes, Fuels, Transportation, *Corrosion, Bacteria.

Wickert, K.
PREVENTION OF SULFURIC ACID DEW POINT CORROSION BY USE OF TERAMIN. [1962] 14p.
Order from ATS $16.35 ATS-74P60G

Trans. of Energie (West Germany) 1959, v. 11, no. 8, p. 344-350.

DESCRIPTORS: *Sulfuric acid, Acids, Dew point, Corrosion, *Corrosion inhibition.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

ANNUAL REPORT OF NETHERLANDS REACTOR CENTER FOR 1959. 28 Apr 61 [65]p. JPRS: 8181.
Order from OTS or SLA $6.60 62-19290

Trans. of Reactor Centrum Nederland, The Hague. [Verslag] 1959, p. 1-87.

DESCRIPTORS: *Nuclear physics, *Research reactors, Neutron flux density, Design, Safety, Public health, Personnel, Housing, Training, Libraries, Documentation, Physics, Radiochemistry, Chemistry, Construction, Instrumentation, Control, Isotope separation, Ultracentrifuges, *Research program administration, Costs, *Netherlands.

HUNGARIANS HOLD INTERNATIONAL CONFERENCE ON NUCLEAR PHYSICS, BALATONOSZOD, 14-20 SEP 60. 14 June 61 [7]p. JPRS: 8440.
Order from OTS or SLA $1.10 62-19384

Trans. of Fizikai Szemle (Hungary) 1961, v. 11, no. 2, p. 60-61.

DESCRIPTORS: *Nuclear physics, Conferences, *Hungary.

Czarnecki, Jerzy.
PARAMETERS OF RADIOACTIVE RELAYS. 30 Nov 61 [16]p. JPRS: 11288.
Order from OTS or SLA $1.60 62-19686

Trans. of Nukleonika (Poland) 1961, v. 6, no. 2, p. 85-96.

DESCRIPTORS: *Electronic relays, *Radioactive isotopes, *Electronic circuits, Trigger circuits, Operation, Reliability, Geiger counters.

The parameters of radioactive relays are discussed. Graphical methods are given for selecting the relay parameters, the most suitable isotope, and its activity. (Author)

RADIOCHEMISTRY, 1960, VOL. 2, NOS. 3-4. 1962, 253p. PL-480 AEC.
Order from OTS $2.75 AEC-tr-4577

Trans. of Radiokhimiya (USSR) 1960, v. 2, no. 3, p. 265-[379] and no. 4, p. 381-[506].

DESCRIPTORS: *Radio chemistry, *Plutonium, Hydrocarbons, *Uranium, Zirconium, Phosphates, Butyl radicals, *Cerium, Nitric acid, *Uranyl radicals, Nitrates, Infrared spectroscopy, Acetones, *Nepunium

compounds, Acetates, *Americium, Peroxides, Disproportionation, Sulfates, Potassium compounds, *Radioactive isotopes, Ammonium radicals, Carbonates, Crystal structure, Calcium, *Rubidium compounds, Barium, Phosphoric acids, Lead, Cadmium, Oxygen compounds, *Cesium, Dolomite, Iodine, Radium, *Radioactivity, *Strontium, *Meteorites, Polonium, Lanthanum.

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Study of the influence of the ionic radius of the microcomponent on the value of the crystallization coefficient in the systems $PbCl_2$-$SrCl_2$-$CdCl_2$ and $PbCl_2$-$SrCl_2$-KCl, by V. R. Klokman and G. I Avdulov

The distribution of zirconium on extraction with n-tributyl phosphate, by N. M. Adamskii and others

The distribution of butylphosphoric acids between aqueous solutions and tributyl phosphate, by A. D. Ilozhev and others

Extracting capacity of neutral oxygen-containing organic compounds, by V. G. Timoshev and others

Organic coprecipitants. XIV. An improved method for the coprecipitation of uranium from natural waters, by V. I. Kuznetsov and T. G. Akimova

Preparation of concentrates of radioactive cesium with glauconite ion-exchange columns, by S. Z. Roginskii and others

Preparation of concentrates of radioactive isotopes of cesium with ferrocyanides of heavy metals from solutions with a high content of other salts; by S. Z. Roginskii and others

The interaction between semicalcined dolomite (magnomass) and various elements present in aqueous solutions in microconcentrations, by V. F. Bagretsov and V. V. Pushkarev

Light iodine isotopes, by N. G. Zaitseva and others

The study of isotope effects in β-decay of natural lead isotopes, by V. D. Nefedov, Yu. A. Ryukhin, and M. A. Toropova

Paper chromatography study of the chemical forms of RaE obtained in the process of β-decay of RaD, by V. D. Nefedov and S. A. Grachev

Investigations in the field of analysis of the composition of the radioactive contaminations of the external environment. I. Theoretical foundations of the use of complexions for the separation of a strontium-90 rich fraction from natural substances, by V. L. Anokhin

The determination of the composition of mixtures of β-emitters by absorption in aluminum layers, by V. L. Anokhin

The effect of humidity on emanation, by V. I. Baranov and A. P. Novitskaya H^3 and Ar^{39} in iron meteorites, by L. K. Levskii

(for rest of abstract see TT, v. 8, p.)

Effect of γ-irradiation of polonium on concentrated sulfuric acid solutions, by M. V. Vladimirova and Z. V. Ershova

Determination of the solubility of double sulfates of lanthanum and cerium in saturated solutions of potassium sulfate, by means of radioactive tracers, by V. N. Bobrova

The problem of instability constants of oxalate complexes of uranium, by A. A. Grinberg, G. I. Petrzhak, and L. I. Evteev

A simple method for the determination of the specific activity of phosphate samples, by R. Antoshevskii and Ya. S. Knypl

Author and subject indexes.

Dzhelepov, B. S.
ISOBARIC NUCLEI WITH THE MASS NUMBER A=74. International Series of Monographs on Nuclear Energy, div. 2, Nuclear Physics Properties of Atomic Nuclei no. 1. May 62, approx. 40p.
Order from PP approx. $1.50

Trans. of mono. [Izobarnye Yadra s Massovym Chislom A=74, Moscow/Leningrad, 1959].

DESCRIPTORS: Gallium, Germanium, Arsenic, Selenium, Bromine, *Radioactive isotopes, Labeled substances, Atoms, *Nuclei, *Atomic mass unit, *Nuclear isobars, *Radioactive decay, Half life, Excitation, Electrons, Electron capture, Beta decay, Beta ray spectroscopy, Bibliography, Nuclear physics, *Nuclear energy.

Ercoli, R., Calderazzo, F., and Alberola, A.
SYNTHESIS OF BIS (TRICARBONYLCHROMIUM) COMPLEXES BY REACTION OF BINUCLEAR AROMATIC COMPOUNDS WITH TRICARBONYLCHROMIUM-ARENES. 19p. 6 refs. MTWL: 1110.
Order from OTS or ETC $1.85 62-26056

Trans. of Chimica e l'Industria (Italy) 1959, v. 41, no. 10, p. 975-980.
Another trans. is available from SLA mi $2.40, ph$3.30 as 60-14560 [1960] [17]p.

DESCRIPTORS: *Chronium compounds, Organic compounds, *Carbonyl radicals, Synthesis, Benzenes.

Gromov, V. F., Khomikovskiĭ, P. M., and Abkin, A. D.
COPOLYMERISATION DE l'ACRYLONITRILE ET DE l'ETHYLENE SOUS l'ACTION DU RAYONNEMENT GAMMA (Sovmestnaya Polimerizatsiya Akrilonitrila i Etilena pod Deĭstviem γ -Izlucheniya) (Copolymerization of Acrylonitrile and of Ethylene under the Influence of Gamma Radiation). 11p. (foreign text included). 10 refs. F/R-2570. (text in French).
Order from OTS or ETC $1.55 62-28003

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1961, v. 3, no. 7, p. 1015-1019.

DESCRIPTORS: *Acrylonitriles, *Ethylenes, *Polymerization, Gamma rays, Toluenes, Solutions.

Ioffe, E. M.
UNDERSÖKNINGAR PÅ OMRÅDET NORMALA BLANDKRISTALLER MED HJÄLP AV RADIOAKTIVA INDIKATORER (Investigations in the Field of Anomalous Mixed crystals, with the Aid of Radioactive Indicators) tr. by J. Mednis. 9p. (p. 5 not printed) 5 refs. (text in Swedish).
Order from OTS or ETC $1.55 62-26004

Trans. of Radiokhimiya (USSR) 1959, v. 1, [no. 1] p. 22-25.

DESCRIPTORS: *Ammonium radicals, *Chlorides, Solutions, Crystals, *Chromic acids, Ions, *Radioactive isotopes, Phase studies.

Kobzarev, I. Yu. and Okun, L. B.
MODELE DE L'INTERACTION ANORMALE DU MESON μ (A Model of Anomalous Interaction of Muon) tr. by N. Mouravieff. 28p. 17 refs. (text in French).
Order from OTS or ETC $2.43 62-26069

Trans. of Rapport ITEF 61-14 (USSR) 1961.

DESCRIPTORS: *Mesons, *Electrons, Scattering, Nuclear reactions, Theory.

Kopylov, Yu. M.
SOVIET COSMIC RAY STATIONS. 18 Sep 61 [62]p. 25 refs. MCL-981; AD-265 661.
Order from OTS or SLA $6.60 62-13054

Unedited rough draft trans. of mono. Sovetskiya Stantsii Kosmicheskikh Luchei, Moscow, 1960, 32p.

DESCRIPTORS: *Cosmic ray laboratories, Cosmic rays, Recording systems, Instrumentation, Measurement.

The present work represents a short description of the standard recording apparatus and of the stations for cosmic rays which are conducting observations according to the program of the International Geophysical Year in the Soviet Union. The author considers only the basic types of recording systems (the ASK-type ioization chamber, the monitor, and the cubic telescope). The Soviet Union is exchanging extensively the initial data obtained by these instruments through the IGY World Data Centers. (Author)

Levin, V. I., Golutvina, M. M., and Tikhomirova, E. A.
SÉPARATION DU ^{58}Co SANS ENTRAINEUR, PAR EXTRACTION À PARTIR DU NICKEL IRRADIÉ PAR DES NEUTRONS (Vydelenie Co^{58} Bez Nositelya Iz Obluchennogo Neitronami Nikelya Metodom Ekstraktsii) tr. by Lichkine. [1961] [24]p. (Russian text included) 16 refs. CEA Trans. no. R 1405 (text in French).
Order from OTS or SLA $2.60 62-13820

Trans. in French of Radiokhimiya (USSR) 1960, v. 2, no. 5, p. 596-602.

DESCRIPTORS: Separation, *Cobalt, *Nickel, Neutrons, Phosphates, Butyl radicals, Chlorides, *Radioactive isotopes.

On a établi la méthode de séparation du cobalt du nickel par extraction au tributylphosphate à partir d'une solution de chlorure. Par cette méthode, on a séparé du ^{58}Co sans entraineur de l'oxyde de nickel irradié par neutrons dans un réacteur. La pureté radiochimique du ^{58}Co dégagé a été examinée et le résidu du ^{60}Co a été déterminé. (Author)

Niewodniczanski, Henryk.
RESEARCH AT THE KRAKOW NUCLEAR PHYSICS INSTITUTE. 12 Mar 62 [23]p. JPRS: 12916.
Order from OTS or SLA $2.60 62-23442

Trans. of Nauka Polska, 1961, v. 9, no. 4(36) p. 123-138.

DESCRIPTORS: *Nuclear physics laboratories, Cyclotrons, Nuclear energy, Nuclear reactors, Neutron scattering, Nuclear resonance, Fast neutrons, Radioactivity, Radiochemistry, Isotope separation, Beta ray spectroscopy, Gamma ray spectroscopy.

Petrenko, I. G.
UNTERSUCHUNG DES MECHANISMUS DER REDUKTIONS-REAKTION DES KOHLENDIOXYDS MIT HILFE RADIOAKTIVEN KOHLENSTOFFES (Process of Reduction Reaction of Carbon Dioxide by Means of Radioactive Carbon). 12p. (text in German).
Order from T.I.B. $1.85

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1957 [v. 2] no. 7, p. 15-20.

DESCRIPTORS: *Oxidation-reduction reactions, *Carbon dioxide, *Radioactive isotopes, Carbon.

Pinkas, K. and Borysowski, J.
POLISH-YUGOSLAV CONFERENCE ON PRODUCTION OF NUCLEAR RAW MATERIALS [NO. 1, SVETI STEFAN, 8-16 SEP 60]. (Polsko-Jugoslawianska Narada w Sprawie Metod Przerobu Surowcow Nuklearnych). 11 Sep 61 [5]p. JPRS: 10105.
Order from OTS or SLA $1.10 62-19569

Trans. of Nukleonika (Poland) 1961, v. 6, no. 1, p. 68-69.

DESCRIPTORS: *Conferences, Poland, Yugoslavia, *Nuclear energy, *Strategic materials, Production, Nuclear physics, Atomic energy engineering.

Varshavskii, Ya. M. and Vaisberg, S. E.
MODERN METHODS OF PRODUCING HEAVY WATER. 21 Feb 62 [37]p. 32 refs. JPRS: 12674.
Order from OTS or SLA $3.60 62-19758

Trans. of Khim[icheskaya] Nauka i Prom[yshlennost'] (USSR) 1959 [v. 4] no. 4, p. 498-509.

DESCRIPTORS: *Heavy water, Heavy water reactors, Costs, Industrial production, Deuterium, Recovery, Water, Electrolysis, Hydrogen, Isotope separation, Liquid hydrogen, Heat exchangers, Towers (Chemistry)

Elementary Particles

Aripov, R. A., Grishin, V. G. and others.
SCATTERING OF π -MESONS OF 7-8 GeV ENERGY ON NUCLEONS, WITH LARGE MOMENTUM TRANSFERS. 6p. 4 refs.
Order from OTS or ETC $1.55 62-26003

Trans. of Joint Institute for Nuclear Research (USSR) Report no. P. 765, 1961.

DESCRIPTORS: *Meson scattering, *Nucleons, Photographs, Pions.

Nassenstein, H.
AUTOMATIC COUNTING AND SIZING OF MICROSCOPIC PARTICLES. [1961] 29p. (4 figs. omitted) 30 refs.
Order from SLA $2.60 62-14037

Trans. of Chemie-Ing[enieur]-Techn[ik] (West Germany) 1954, v. 26, p. 661-667.

DESCRIPTORS: *Particles, *Counting methods, Automatic, Aerosols, Instrumentation, Determination.

Nuclear Engineering and Power

TRANSLATION OF NEWSPAPER ARTICLES ON ATOMIC ENERGY DEVELOPMENT IN ISRAEL. 2 Mar 61 [13]p. JPRS: 6851.
Order from OTS or SLA $1.60 62-19435

Trans. of 6 selected articles from Haaretz (Israel) 1960, 25-26 Dec; Lamerhav (Israel) 1960, 4 Oct; and Bamahaneh (Israel) 1960, 9 Dec and 20 Dec.

DESCRIPTORS: *Atomic energy engineering, Engineering, Atomic energy, Power reactors, Nuclear power plants, Nuclear energy, Atoms, Engineering personnel, Personnel, Training, Economics, *Israel.

Contents:
Reactor to be utilized for Mediterranean-Dead Sea channel and power station, by Haviv Kena'an
Jewish family from western hemisphere contributed money to Negev reactor
Institute of technology trains nuclear engineers
Prospects for cooperation in atomic research with other states
Israel and "Atoms for Peace", by Israel Glass
Development of Israeli nuclear power, by Yosef Levita.

Stauber, Erich.
PROCEDURE FOR REACTOR PLANT SITE SELECTION BASED ON NUCLEAR ASPECTS (Standortwahl und Grösster Anzunehmender Unfall bei Reaktoranlagen). Feb 62, 31p. 9 refs.
Order from OTS $0.75 AEC-tr-4440

Trans. of Atomkernenergie (West Germany) 1961, v. 6, p. 165-170.

DESCRIPTORS: *Nuclear power plants, Power plants, Germany, Selection, Safety, Contamination, Fission products, Radioactivity, Public health.

When selecting the site for a reactor, the effects of the maximum credible accident should be considered. Based on a safe and realistic evaluation of the accident effects, a procedure for evaluating the safety of the location is given. The necessary fundamentals for calculating the radioactive exposure of human beings take into consideration in generalized form the time-dependent release of radio-active materials after the accident. (Author)

Radioactivity

EAST GERMAN DECREE ON DELIVERY CONDITIONS PERTAINING TO RADIOACTIVE SUBSTANCES (Anordnung Über die Allgemeinen Lieferbedingungen für Radioaktive Stoffe). 12 May 61 [8]p. JPRS: 9256.
Order from OTS or SLA $1.10 62-19437

Trans. from Gezetzblatt der Deutschen Demokratischen Republik (East Germany) 1960, pt. III, no. 10.

DESCRIPTORS: *Radioactive isotopes, Handling, Control, East Germany.

Breslavets, L. P. and Mileshko, Z. F.
IMPORTANCE OF POLYPLOIDY IN THE PROTECTION OF PLANTS AGAINST IONIZING RADIATION (Znachenie Poliploidii v Zashchite Rastenii ot Ioniziruyushchikh Izluchenii). 24 Oct 61, 10p. 4 refs. Trans. A-1304.
Order from OTS or SLA $1.10 62-13470

Trans. of mono. Fiziko-Khimicheskie i Strukturne Osnovy Biologicheskikh Yavlenii, Moscow, 1960, p. 169-174.

DESCRIPTORS: *Chromosomes, *Radiation damage, Countermeasures, Growth, Seeds, Nucleic acids, Pollen, Gamma rays, Neutrons, *Plants.

Experiments in protection of plants [against radiation] with the aid of chemical action produce successful results which can be explained by a decrease of chromosome aberrations. But such protection has an individual character and cannot serve large fields. When polyploid (tetraploid) forms are present in the sowing material it is possible to protect large cropping areas from ionizing radiation. The tetraploid rye which we obtained in a sufficiently large number of experiments enabled us to set up experiments on the protective action of double genomes against two types of ionizing radiation. The doubling up of genomes in winter rye led to the protection against neutrons which was expressed in terms of an increase in the growth of shoots and germination energy. The doubling up of genomes in winter rye led to the protection against gamma-rays which was expressed in terms of an increase in the growth of shoots and viability of pollen grains. (Author)

Zharov, P. N.
MÉTHODE ACCÉLERÉE DE DOSAGE DU RADIUM DANS LES EAUX (Uskorennyi Metod Opredeleniya Radiya v Vodakh) tr. by B. de Trezvinsky. [1961] [6]p. CEA Trans. no. R 1391 (text in French).
Order from OTS or SLA $1.10 62-13811

Trans. of French of Radiokhimiya (USSR) 1960, v. 2, no. 5, p. 630-631.

DESCRIPTORS: Test Methods, *Water, *Contamination, *Radium.

PHYSICS

HUNGARIAN PHYSICISTS DEFEND DISSERTATIONS (A Tudomanyos Minosito Bizottsag Hirei). 31 July 61 [21]p. JPRS: 9746.
Order from OTS or SLA $2.60 62-19586

Trans. of Magyar Tudomanyos Akademia Matematikai es Fizikai Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1961, v. 11, no. 1, p. 107-118.

DESCRIPTORS: *Scientific personnel, *Theses, Education, Nuclear reactions, Chain reactions, Statistical data, Crystals, High pressure research, Electronics, Polymerization, Groups (Mathematics), Algebra.

MEETING OF HUNGARIAN PHYSICISTS (NO. 9) IN PECS, 23-26 AUG 61. 19 Mar 62 [23]p. JPRS: 13044.
Order from OTS or SLA $2.60 62-23617

Trans. of Fizikai Szemle (Hungary) 1961, v. 11, no. 12, p. 380-384.

DESCRIPTORS: *Scientific personnel, *Physics, *Biophysics, Scientific research, *Hungary.

THE RUDJER BOSKOVIC PHYSICS RESEARCH INSTITUTE OF ZAGREB. 10 Apr 61 [5]p. JPRS:8075.
Order from OTS or SLA $1.10 62-19237

Trans. from Delo (Yugoslavia) 1960, no. 311, p. 8.

DESCRIPTORS: *Scientific research, Scientific organizations, *Yugoslavia, *Universities, *Physics, Nuclear physics, Chemistry, Biology.

Bartecki, Adam and Jezowska-Trzebiatowska, Boguslawa.
THE OSCILLATIONAL STRUCTURE OF THE ELECTRON SPECTRA OF URANYL NITRATE, PTS. 1-3. 30 Nov 61 [27]p. JPRS: 11289.
Order from OTS or SLA $2.60 62-19685

Trans. of Nukleonika (Poland) 1961, v. 6, no. 4, p. 267-275, 277-285, 287-294.

DESCRIPTORS: *Uranyl radicals. *Nitrates, *Absorption spectra, Electron transitions, Organic solvents, Ions, Dissociation, Energy, Vibration, Oscillation, Electrons.

Contents:
Force constants and U-O distances in organic solvents
The dissociation energy of the uranyl ion
Transition intensities in uranyl nitrate spectra.

Dietrich, Isolde.
EXPERIMENTS ON THE SUPERCONDUCTIVITY OF CONTACTS. [1961] 7p. 4 refs.
Order from SLA $1.10 62-10516

Trans. of Zeitschrift für Physik (West Germany) 1952, v. 133, p. 499-503.

DESCRIPTORS: Tantalum, *Superconductors, Electrodes, Electric connectors, Electrons. *Superconductivity.

Contacts between electrodes of superconducting Ta, covered with insulating layers of known thicknesses of TiO_2 or CeO_2 became superconductive. The relationship of the transition curves to the thickness of the layer and to load current is investigated. (Author)

Izmaĭlov, S. V.
CONTRIBUTION A LA THEORIE DE l'EMISSION CONETIQUE IONO-ELECTRONIQUE DANS LES METAUX II. (Contribution to the Theory of the Conical Ion-electronic Emission in Metals. II.) 20p. (foreign text included). 23 refs. F/R-2589. (text in French).
Order from OTS or ETC $1.87 62-28007

Trans. of Fizika Tverdogo Tela (USSR) 1959, v. 1, no. 10 [p. 1546-1556].

DESCRIPTORS: *Metals, *Electrons, *Ion bombardment, Energy, Theory.

Totaro, Carmelo.
MAGNETO-HYDRODYNAMIC WAVES IN VISCOUS FLUIDS. May 62, 1550 words.
Order from LSA $15.00

Trans. of Modena U. Semenario Mat[ematico] e Fis[ico]. Atti (Italy) 1959, v. 9, p. 13-23.

DESCRIPTORS: *Magnetohydrodynamics, *Fluids, Viscosity

Acoustics

Fridman, V. M.
ULTRASONICS. 18 Sep 61 [68]p. MCL-1298; AD 264 622.
Order from OTS or SLA $6.60 62-23364

Unedited rough draft trans. of mono. Ul'trazvuk, Moscow, 1960, 48p.

DESCRIPTORS: *Handbooks, *Ultrasonics, Ultrasonic properties, Processing, Crystallization, Cavitation, Vibrations, Chemical properties, Physical properties, Industrial research, *Laboratory equipment, Transducers, Flowmeters, Radiators, Mathematical analysis, Fourier analysis.

We discuss mainly the general physicochemical principles of the effect of ultrasonics, and the apparatus used. (Author)

Hashimoto, Tomiju and Maniwa, Yoshinobu.
NOISE OF CREATURES IN SEA IN REGION OF ULTRASOUND, tr. by Grace Y Beard. 1959 [15]p. (22 figs. omitted) 5 refs.
Order from OTS or SLA $1.60 60-19855

Trans. of [Gyosen Kenkyu Giho] (Japan) 1958, no. 12, p. 99-114.

DESCRIPTORS: *Aquatic animals, Noise, *Underwater sound, *Ultrasonics, Ultrasonic radiation, Production.

Experiments in a water tank showed that shellfish (common shield clam, short-necked clam) and crustaceans (spiny lobsters, crabs), produce ultrasonic sounds when they crawl on sand and rocks, or move their antenna and claws, or when shellfish respires. Hermit crab, serpula and tomaya-gai (Cardita cuminigiana) that live on beach rocks are a noticeable source of ultrasonic sound. Whales and dolphins also produce a crying sound which reach the ultrasonic band. Ultrasonic sound is produced when surffish and filefish abruptly change their swimming direction. The swimming noise of amberjack has a component in the ultrasonic band. Since the noise made by whales and dolphins are peculiar and loud, the usage of a hydrophone may be considered in locating the species in the open sea. Generally speaking, the noise in the sea is far smaller in the open sea than near the coast, both in the audio frequency and in the ultrasonic band. This is probably because noise caused by waves on the beach decreases offshore. However, a decrease in the noise made by marine animals is also considered to be one of the causes.

Zasedatelev, S. M. and Rukhadze, V. A.
BERECHNUNGS- UND KONSTRUKTIONSELEMENTE FÜR GEBER MIT KRAFTKOMPENSATION (Design of Transducers with Force Compensation). 16p. (text in German).
Order from T.I.B. $1.85

#Trans. of Avtomatika i Telemekhanika (USSR) 1960, v. 21, no. 6, p. 918-928.

DESCRIPTORS: *Transducers, *Design, Pneumatic devices, Errors.

Electricity and Magnetism

Greiner, Ch.
INVESTIGATIONS OF THE REVERSAL OF THE SPINORS IN CHARGED 180° BLOCH WALLS. [1961] 20p. 4 refs.
Order from SLA $1.60 61-20537

Trans. of Annalen der Physik (East Germany) 1959, ser. 7, v. 5, no. 1/2, p. 57-69.

DESCRIPTORS: Nickel alloys, Iron alloys, Alloys, *Ferromagnetic materials, Magnetic materials. Stresses, Electrostatics, Energy, Thickness, Magnetic properties.

Based on experimental results, an investigation of the reversal of magnetization vectors is made for a plate-shaped pattern of charged 180° Bloch walls on the assumption of uniaxial anisotropy. The charge distribution in the Bloch wall is indicated for three characteristic paths of the reversal, and thickness of wall d_o and the energy density E are calculated. d_o and E are discussed as a function of the angle between the magnetization and its component in the plane of the Bloch wall for two different relations between magnetostatic energy and anisotropy energy. (Author)

Zhigalov, L. N.
SOME FEATURES OF THE VARIATION OF THE GEOMAGNETIC VERTICAL COMPONENT IN THE ARCTIC OCEAN, tr. by E. R. Hope. Oct 61, 4p. 4 refs. DSIS T 358 R.
Order from NRCC NRCC C-3856

Trans. from [Zemnoi Magnetizm i Zemnye Toki: Sbornik Statei] (USSR) 1960, no. 4.

DESCRIPTORS: *Arctic Ocean, *Terrestrial magnetism, Magnetism, Measurement, Periodic variations, Weather stations.

Electronics

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION, RADIO PHYSICS SERIES, 1961, VOL. 4, NO. 3. 1 Mar 62 [410]p. refs. JPRS: 12754.
Order from OTS or SLA $22.25 62-23412

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Seriya Radiofizika (USSR) 1961, v. 4, no. 3, p. 389-584.

DESCRIPTORS: *Electronics, *Radio signals, *Radio astronomy, Astronomy, Sun, Solar corona, Moon, Thermal radiation, Antennas, Telescopes, Calibration, Solar energy, Plasma physics, Electromagnetic waves, Electrons, Density, Magnetic fields, Radio waves, Propagation, Amplifiers, Paramagnetic resonance, Resonance, Oscillators, Temperature, Noise (Radio), Radio receivers, Sensitivity, Spectrographic analysis, Waveguides, Electron beams, Gas discharges, Detectors, Microwaves, Control systems, Dynamics, Venus, Particles, Ferromagnetism, Impact shock, Damping, Algebra, Linear systems.

Contents:
Aleksandr Aleksandrovich Andronov (on his sixtieth birthday)
Radio astronomical method of absolute measurements of the intensity of signals, calibration of antennas and radiotelescopes in the centimeter band, by V. S. Troitskii and N. M. Tseitlin
Effect of the supercorona on radio emission from the sun, by V. V. Vitkevich and N. A. Lotova
Lunar thermal radio emission in the 10 cm band, by V. N. Kostchenko, A. D. Kuzmin, and A. E. Salomonovitch
Observations of the lunar radio emission at 2.3 cm wavelength with the large Pulkovo radio telescope, by N. L. Kaidanovskii, V. N. Ikhsanova and others
Lunar and solar radio emission in the 4 mm band, by A. G. Kislyakov
On the instability of low frequency electromagnetic waves in plasma with a beam of charged particles (the propagation at an arbitrary angle to the direction of the magnetic field) by M. S. Kovner
Electromagnetic wave propagation in an unstable magnetroactive plasma, by M. I. Petelin
Parameter fluctuations of an electromagnetic field propagated through a magneto-active plasma with random fluctuations of electron density and magnetic field, by F. G. Bass
Propagation of radio waves over a statistically rough surface, by F. G. Bass
Theory of a quantum amplifier with a traveling surface wave, by A. M. Glutsyuk, V. M. Kontorovich and G. E. Chernyak
Concept of effective temperature for stationary non-equilibrium systems, by V. F. Bunkin
Noise in an excited two-level medium, by V. S. Troitskii and V. B. Tsaregradskii
On the sensitivity of a radio receiver, by I. L. Bershtein and K. A. Goronina
Approximate method for the analysis of nonstationary fluctuation spectra, by A. V. Men'
Experimental investigation of the influence of inhomogeneities on the characteristics of certain slow-wave systems, by V. I. Bespalov, A. M. Kubarev, and L. I. Solov'eva
Relativistic dispersion equation for waveguide systems with helical and trochoidal electron beams, by A. V. Gaponov
Operation of gas-discharge microwave mixer at high intermediate frequencies, by G. D. Lobov
Dynamics of simplest extremal regulator with self-oscillating type of search, by G. A. Novinskaya
Radio emission from venus in the 4 mm band, by A. D. Kislyakov, A. D. Kuz'min, and E. E. Salomonovich
Transition radiation in moving media, by K. A. Barsukov and L. G. Naryshkina
On the question of calculation of the induction EMF spectrum in cyclic reversal of ferromagnetism, by A. M. Rodichev
On the theory of impact dampers, by M. I. Feygin
Algebraic method of calculating linear automatic systems with digital computers, by L. N. Volgin and L. I. Smolyar.

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS, MINISTRY OF HIGHER [AND SECONDARY SPECIALIZED] EDUCATION, RADIO PHYSICS SERIES, 1961, VOL. 4, NO. 4. 15 Mar 62 [422]p. refs. JPRS: 12990.
Order from OTS or SLA $22.25 62-23650

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. [Radiofizika] 1961, v. 4, no. 4, p. 591-784.

DESCRIPTORS: *Electronics, *Radio signals, *Radio astronomy, Astronomy, Ionosphere, Drift, Plasma physics, High frequency, Electromagnetic waves, Propagation, Diffraction, Correlation techniques, Ferromagnetism, Magnetic fields, Capacitors, Molecules, Generators, Reflection, Resonance, Nuclear magnetic resonance, Oscillators, Transmission lines, Waveguides, Electron beams, Parametric amplifiers, Amplifiers, Frequency converters, Linear systems, Relays, Hydroelectric power systems, Statistical distribution, Cosmic rays, Absorption, Cerenkov radiation, Thermal radiation, Cathodes, Circuits, Functions.

Contents:
Observations of thermal radio emission from the moon on 2 centimeters, by A. E. Salomonovich and V. N. Koshchenko
Radio emission from the moon on 3.2 centimeters, by V. N. Koshchenko, B. Ya., Losovski and A. E. Salomonovich
Phase variation of the radio emission from the moon on 3.2 centimeters, by K. M. Strezhnena and V. S. Troitskii

Results of research on ionospheric drifts above the city of Gor'kiy in 1957-59, by L. V. Grishkevich
Instability of a magnetoactive plasma against high-frequency electromagnetic disturbances, III, by V. V. Zheleznyakov
Diffraction of waves by a random screen, by N. G. Denisov
Instability of uniform precession of magnetization, by L. N. Bulaevskii
Use of a ring capacitor for molecule sorting in a molecular generator, by V. A. Shcheglov
Resonant reflection of waves in a system with periodically varying parameters, by N. S. Stepanov
Parametric locking of the frequency of an autodyne generator in a nuclear magnetic resonance spectrometer, by Yu. R. Dolinin and N. M. Pomerantsev
Small-fluctuation spectrum of steady-state oscillations of a self-oscillator of the general type, by L. I. Gudzenko
Stationary waves in nonlinear discrete transmission line, by Yu. K. Bogatyrev
Design of resonator slow-wave systems by the equivalent static method, by I. Sh. Beluga
Helical waves in a helical waveguide, by V. P. Shestopalov and A. I. Adonina
Parametric amplification and frequency conversion in a wide electron beam, by V. A. Solntsev
Multi-frequency resonant oscillations in quasi linear systems with delayed arguments, by V. P. Rubanik
Effect of fluctuations of the initial conditions on the establishment of oscillations in a generator with two stable states, by S. A. Akhmanov
Estimate of emission properties of a pressed cathode with base of barium aluminate, by A. I. Zhadan
Concerning an investigation of the stability of periodic motions of quasi-linear systems, by Yu. I. Nemark and L. P. Shil'nikov
Use of nonlinear resonant circuits for the construction of pulse circuits, by V. R. Telesnin
Generation of nonlinear functions with analog computers, by A. S. Alekseev, V. A. Dozorov and M. L. Tai
World data center of the International Geophysical Year.
Self oscillations in systems with two relay elements, by B. R. Sergievskii
Contribution to the question of stability in the large of stationary modes of hydroelectric power stations with surge tanks, by G. V. Aromovich
The production of discrete random quantities with different distribution laws, by S. G. Kuzin
Short communications and letters to editor standardization of radio emission from the moon at 3.2 cm, by V. D. Krotikov, V. A. Porfir'ev and V. S. Troitskii
Preliminary results of experimental investigation of radio emission from the sun on 3.7 mm, by A. G. Kislyakov and Yu. S. Korobkov
Absorption of cosmic radio emission during the time of the magnetic storm of 1 Apr 60, by E. A. Benediktov
Concerning one case of Cerenkov instability in non-equilibrium magnetoactive plasma, by M. S. Kovner
Thermal radiation in a transparent medium, by V. P. Silin

THIS WILL INTEREST YOU TOO! 3 June 60, 3p.
USASIA: SC-164/60; JPRS: R-707-D.
Order from OTS or SLA $1.10 60-31215

Trans. of das Elektron (Austria) 1957 [v. 10] no. 8, p. 208.

DESCRIPTORS: *Electronics, *Electronic equipment.

Items that were newsworthy in 1957 for Austrian electronics personnel are reported.

THIS WILL INTEREST YOU TOO! 3 June 60, 2p.
USASIA: SC-165/60; JPRS: R-708-D.
Order from OTS or SLA $1.10 60-31216

Trans. of das Elektron (Austria) 1957 [v. 10] no. 9, p. 240.

DESCRIPTORS: *Electronics, *Electronic equipment.

Items that were considered newsworthy in 1957 for readers of an Austrian electronics journal are given.

THIS WILL INTEREST YOU TOO! 3 June 60, 6p.
USASIA: SC-166/60; JPRS: R-709-D.
Order from OTS or SLA $1.10 60-31217

Trans. of das Elektron (Austria) 1957 [v. 10] no. 12, p. 342-343 and 364.

DESCRIPTORS: *Electronics, *Electronic equipment.

The material presented here was apparently from a news column in the Austrian electronics periodical.

THIS WILL INTEREST YOU TOO! 3 June 60, 3p.
USASIA: SC-167/60; JPRS: R-710-D.
Order from OTS or SLA $1.10 60-31218

Trans. of das Elektron (Austria) 1958 [v. 11] no. 1/2, p. 4 and 9.

DESCRIPTORS: *Electronics, *Electronic equipment.

Khoklov, R. V.
ON THE LOCKING THEORY FOR SMALL AMPLITUDES OF THE EXTERNAL FORCES [K Teorii Zakhvatyvaniya pri Maloi Amplitude Vneshnei Sily]. [1959]. MDF K-176
Order from OTS $0.50 62-11308

Trans. of A[kademiya N[auk] SSSR. Doklady, 1954, v. 97, no. 3, p. 411-414.
Other translations are available from OTS or SLA $1.10 as 62-10161 [1961] 10p. and from OTS $1.60 as AD-264 172.

DESCRIPTORS: Mathematical analysis, *Non-linear systems, *Electronic equipment, Electronic circuits, Electron tubes, Electric fields, Harmonic oscillators, Capacitors, Generators, Synchronizers, Feedback, Amplifiers, Amplitude modulation, Theory, Non-linear differential equations.

An explanation is given of the method of solving the problem of the effect of small external periodic forces on Thomson-type self-oscillating systems. The explanation is carried out on the simplest example of this kind, the locking of self-oscillating systems by small external sinusoidal forces. The method consists of first estimating the degree of smallness of the quantities entering into the "contracted" equations, expanding these equations in terms of a small parameter and solving the equations which are thus simplified.

Optics

Avak'yants, G. M.
ON THE QUESTION OF LIGHT SCATTERING BY A PLASMA Nov 60 [8]p. MDF A-155; AFCRL-TN-60-1150; AD-251 770.
Order from OTS $0.50 62-11376

Trans. of A[kademiya] N[auk] Uzb[ekskoi] SSR [Tashkent]. Izvestiya. [Seriya] Fiz[iko]-Mate[matichеskikh] Nauk, 1960, no. 4, p. 89-92.

DESCRIPTORS: *Plasma physics, Optics, *Light, Scattering, *Electrons.

An analysis is made of scattered light (both plane-polarized and natural) associated with free electrons for which the Thomson formula (referring to an electron initially at rest) applies. The light scattering cross-section is found; multiplication of this by the electron velocity distribution and integration of the expression obtained over two of the three electron velocity components yields the frequency distribution of the intensity in each direction. Results indicate that light scattered is a whole series of lines which can be observed if the difference in their frequencies exceeds the Doppler broadening of lines. Conversely there is a confluent, anomalously broad line. The plasma refractive index is a function of the light frequency and of the number of excited atoms, molecules, ions and electrons. Under certain experimental conditions the temperature of the electron gas and number of electrons per unit volume can be estimated by measuring the scattered wave intensity in two different directions or a different frequencies, but at the same incident light direction.

Lukacs, Gyula.
OPTICAL CONFERENCE IN HUNGARY, BUDAPEST, 7-11 SEP 60 (Optikai Konferencia). 19 June 61 [10]p. JPRS: 9435.
Order from OTS or SLA $1.10 62-19199

Trans. of Meres es Automatika (Hungary) 1961, v. 9, no. 3, p. 91-92.

DESCRIPTORS: *Optics, Conferences, *Hungary.

Prod'homme, L.
TEMPERATURE DEPENDENCE OF THE SPECIFIC REFRACTIVITY. [1962] 15p.
Order from ATS $18.85 ATS-32P60F

Trans. of Rev[ue d']Opt[ique Theorique et Instrumentale] (France) 1961, v. 40, no. 8, p. 407-422.

DESCRIPTORS: Refraction, *Refractive index, Temperature.

Ronzhin, V. V.
A PHOTOMULTIPLIER FOR MEASURING RADIANT FLUX IN LIGHTED MODELS WITH AN ABSORBING MEDIUM. 23 Jan 62 [10]p. 3 refs. FTD-TT-61-319; AD-270 787.
Order from OTS or SLA $1.10 62-43375

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Priborostroenie (USSR) 1961 [v. 4] no. 1, p. 94-98.

DESCRIPTORS: *Light, *Measurement, Instrumentation, Heat transfer, Thermal radiation, Stimulation, *Photomultipliers.

A new method of using an integrating sphere when measuring radiation in lighted models using a l
A new method of using an integrating sphere when measuring radiation in lighted models using a photomultiplier is described. Other devices (light ducts) for correcting photomultiplier sensitivity are presented. (Author)

Solid State Physics

SOLID STATE PHYSICS LABORATORY OF THE CENTRAL PHYSICS RESEARCH INSTITUTE OF HUNGARY. 21 Mar 62 [8]p. JPRS: 13081.
Order from OTS or SLA $1.10 62-23588

Trans. of Fizikai Szemle (Hungary) 1962, v. 12, no.1, p. 32-33.

DESCRIPTORS: *Solid state physics, Scientific research, *Hungary.

Aigrain, P.
SEMICONDUCTORS. [1961] 8p. MDF A-159.
Order from OTS $0.50 62-11350

Trans. of NATO Materials Symposium [held at] Paris, May 61. [Proceedings].

DESCRIPTORS: *Semiconductors, *Solid state physics Materials, Electrical properties, Alloys, Electrical conductance.

Introduction
Review of several elements of solid state physics; application to semiconductors
The classic semiconductor materials and control of their properties
Discovery of compound semiconductors
Solid solution of "semiconductor alloy"
Conclusion.

Akulov, N. S. and Galenko, P. P.
THEORY OF THE PLASTIC DEFORMATION OF METALS [Teoriya Plasticheskoi Deformatsii Metallov]. [1961] 6p. MDF A 105.
Order from OTS or SLA $1.10 62-23224

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1955, v. 103, no. 3, p. 387-390.

DESCRIPTORS: *Metals, *Plasticity, *Deformation, Theory, Solid state physics.

Consideration is given to the case of the deformation of a hollow cylinder when it is twisted in order to develop the part of the shift in pure form. (Author)

Al'tshuler, S. A.
ON THE THEORY OF PARAMAGNETIC RESONANCE IN RARE-EARTH METALS [K Teorii Paramagnitnogo Rezonansa v Redkozemel'nykh Metallakh]. [1961] 10p. 10 refs. MDF A-109.
Order from OTS $0.50 62-11377

Trans. of Zh[urnal] Eksp[erimental'noi i] Teor[eticheskoi] Fiz[iki] (USSR) 1954, v. 26, no. 4, p. 439-446.

DESCRIPTORS: *Rare earth elements, *Paramagnetic resonance, Resonance, Theory, Absorption spectra, Crystals, Lattices, Magnetic fields, Electrons, Relaxation time, Magnetic susceptibility.

There is considered the question of the form of the spectrum of paramagnetic resonance absorption for all the rare-earth metals. Under certain assumptions, there is established the dependence of the absorption on the magnitude of the applied static magnetic field for polycrystalline samples of metals possessing hexagonal or tetragonal lattices. A comparison is made with experimental results for cerium, praesidium, and neodymium. It is established that the atom of rare-earth elements removes three electrons in metals. There is given an explanation of the relatively large values of the time of spin-lattice relaxation in rare-earth metals. (Author)

Al'tshuler, S. A.
PARAMAGNETIC LATTICE RELAXATION TIME OF HYDRATED SALTS OF RARE-EARTH ELEMENTS. [1961] 12p. 11 refs. MDF A-136.
Order from OTS $0.50 62-11378

Trans. of Zh[urnal] Eksp[erimental'noi i] Teor[eticheskoi] Fiz[iki] (USSR) 1953, v. 24, no. 6, p. 681-690. Another trans. is available from LC or SLA mi$2.40, ph$3.30 as 59-10976 [1958] 19p.

DESCRIPTORS: *Rare earth elements, Salts, Hydrates, *Paramagnetic resonance, Resonance, Lattices, *Relaxation time, Temperature, Theory, Crystals, Ions, Electric fields, Cerium, Atoms, Perturbation theory, Probability.

For abstract see Technical Translations 2: 90, 1959.

Amirkhanova, D. Kh. and Bashirov, R. I.
HEAT CONDUCTION OF INDIUM ANTIMONIDE IN A MAGNETIC FIELD. [1960] 5p. 8 refs. MDF A-151.
Order from OTS $0.50 62-11547

Trans. of A[kademiya] N[auk] Az[erbaidzhanskoi] SSR [Baku]. Doklady, 1960, v. 16, no. 2, p. 121-125.

DESCRIPTORS: *Indium alloys, *Antimony alloys, Alloys, *Intermetallic compounds, Thermal conductivity, Electrical conductance, Hall effect, Magnetic fields, Intensity, Semiconductors.

Results are presented of an investigation of the Madzhi-Righi-Leduc (MRL) effect as a function of the magnetic field intensity in the 20° to 450°K range in five samples of indium antimonide of different purity.

Aronov, D. A. and Avak'yants, G. M.
EFFECT OF A BARRIER (OR ANTI-DEPLETION) LAYER AT A METAL-SEMICONDUCTOR CONTACT ON THE VOLT-AMPERE CHARACTERISTIC OF THE p-n JUNCTION. [1960] 17p. 9 refs. MDF A-156.
Order from OTS $0.50 62-11545

Trans. of A[kademiya] N[auk] Uzb[ekskoi] SSR [Tashkent]. Izv[estiya. Seriya] Fiz[iko]-Mate[maticheskikh] Nauk, 1959, no. 6, p. 27-40.

DESCRIPTORS: *Semiconductors, Metals, Electrical properties, Electrodes, Electrons, Electron transitions, Voltage, Impurities, Diffusion, Rectifiers.

Chistyakov, I. G.
LIQUID CRYSTALS: REVIEW, tr. by I. Gawronska. 10 May 61 [23]p. 70 refs. Courtaulds Misc. Lit. 3305; NLL M. 3346.
Order from OTS or SLA $2.60 62-23937

Trans. of #Kristallografiya (USSR) 1960, v. 5, p. 962-976.

DESCRIPTORS: *Liquids, *Crystal structure, Phase studies, Optical properties, Lattices, Electric fields, Magnetic fields, Theory, Crystallography, Deformation.

Dudkin, L. D. and Ostranitsa, A. P.
TERNÄRE HALBLEITERVERBINDUNGEN $A^{I}B^{V}B_{2}^{VI}$. (Ternary Semiconductor Compounds $A^{I}B^{V}B_{2}^{VI}$) (text in German).
Order from T.I.B. $1.85

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 124, p. 94-97.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 59-14570, 5 Mar 59, 7p.

DESCRIPTORS: *Semiconductors.

Fleischmann, H.
THERMAL CONDUCTIVITY AND ELECTRICAL CONDUCTIVITY OF SEMICONDUCTOR OF THE FORM $(A^{I}_{x/2}B^{IV}_{1-x}C^{V}_{x/2})D^{VI}$. Dissertation, Marburg, 1961. [1962] 34p. 36 refs.
Order from SLA $3.60 62-14440

Trans. of Z[eitschrift für] Naturforsch[un]g (West Germany) 1961, v. 16a [no. 8] p. 765-780.

DESCRIPTORS: *Semiconductors, Electrical conductance, Thermal conductivity, Thermoelectricity, Zone melting, Silver, Lead, Antimony, Tellurium, Solids, Liquids.

Irkhin, Yu. P. and Turov, E. A.
ZUR MEHRELEKTRONENTHEORIE DER HALBLEITER II. FERROMAGNETISCHE HALBLEITER (The Multielectronic Theory of Semiconductors. II. Ferromagnetic Semiconductors). (Text in German).
Order from T.I.B. $1.55

#Trans. of Fizika Metallov i Metallovedenie (USSR) 1957, v. 4, no. 1, p. 9-13.

DESCRIPTORS: *Semiconductors, *Ferrites, Ferromagnetic materials, Theory.

Melikhov, I. V.
COCRISTALLISATION DE MICROIMPURETES AVEC DES CRISTAUX EN FORMATION (Sokristallizachiya Mikroprimesi s Rastushchimi Kristallami) tr. by Authier. [1961] [31]p. 30 refs. CEA Trans. no. R 1419 (text in French).
Order from OTS or SLA $3.60 62-13829

Trans. in French of Radiokhimiya (USSR) 1960, v. 2, no. 5, p. 509-520.

DESCRIPTORS: *Crystallization, Crystal structure, Impurities, Chlorides, Lead compounds, Sodium compounds, Cadmium compounds, Titanium compounds, Supersaturation,

L'examen théorique de l'influence des processus de surface et du transfert de masse en solution sur la coprécipitation de micro-impuretés avec les cristaux d'un macroconstituant qui croissent en solution sursaturée, permet de mettre en évidence les causes de leur répartition homogène et hétérogène. On a trouvé une explication du caractère de la répartition des faibles quantités de $PbCl_2$, $CdCl_2$ et TlCl dans le corps de cristaux de NaCl. On a évalué la vitesse absolue d'échange de la surface des cristaux de NaCl avec la solution. (Author)

Krylov, O. V. and Frolov, V. M.
CHEMICAL REACTIONS ON THE SURFACE OF GERMANIUM, SILICON, AND THEIR ELECTRONIC ANALOGUES. 23 Aug 61 [36]p. 73 refs. MCL-1058; AD-269 624.
Order from OTS or SLA $3.60 62-23358

Unedited rough draft trans. of Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) 1960, v. 5, no. 5, p. 535-543.
Another trans. is available from OTS or SLA $2.60 as 62-23039, MDF K-236 [1960] 21p.

DESCRIPTORS: *Semiconductors, *Semiconducting films, Catalysts, *Germanium, *Silicon, Intermetallic compounds, Metallic compounds, Zinc compounds, Nickel compounds, Oxides, Surfaces, Chemical reactions, Catalysis, Reaction kinetics, Adsorption, Impurities, Decomposition, *Surface properties, Theory, *Bibliography, Electronic equipment.
Contents:
Electronic processes of chemisorption in semiconductors
Chemisorption on Ge
Chemisorption on Si and other electronic analogues of Ge
Catalytic reactions on the surface of Ge and its analogues

Pokrovskii, Ya. E
INFLUENCE OF SURFACE LEVELS ON THE ELECTRIC PROPERTIES OF FINE-GRAINED FILMS OF GERMANIUM, SILICON AND TELLURIUM [Vliyanie Poverkhnostnykh Urovnei na Elektricheskie Svoistva Melkozernistykh Plenok Germaniya, Kremniya i Tellura]. [1961] 20p. 22 refs. MDF P-111.
Order from OTS $0.50 62-11518

Trans. of Zhur[nal] Tekh[nicheskoi] Fiz[iki] (USSR) 1954, v. 24, no. 7, p. 1228-1243.

DESCRIPTORS: *Semiconducting films, Surface area, Electrical properties, Grains (Metallurgy), Germanium, Silicon, Tellurium.

The Hall effect and the resistance of fine-grained films of Ge, Si and Te are studied over a wide range of temperatures. Films with variable crystal grain size were obtained by the condensation of semi-conductors, in a vacuum, on condensers at different temperatures. It was established that the electric properties of the films are determined by the nature of the surface level and the grain-size because of the large surface-volume ratio. The Ge surface levels are acceptors. The activation energy of the surface levels, determined through the temperature dependence of Hall's constant, appears to be around 0.004, 0.02 and 0.055 electron volts for germanium. The size of the crystalline grains in the films, determined through the width of the x-ray lines, was between 10^{-5} and 10^{-6} cm. The dependence of the Hall constant on grain size was demonstrated assuming that the surface level of the germanium at room temperature is filled with a density around 3.5×10^{11} cm^{-2}. The resistance of silicon film increases very greatly with increasing condenser temperature (increase of grain size), while the Hall constant does not exceed 0.1 cm^3/coulomb. The indicated peculiarities are explained by the presence of hollows for the silicon and of filled surface bands at small distances one under the other around a middle forbidden band. (Author)

Theoretical Physics

Frish, S. E., Penkin, N. P., and Shukhtin, A. M.
MECHANISM OF EXCITATION OF SPECTRAL LINES IN A HIGH -TEMPERATURE VACUUM OVEN. [1961] [6]p. 6 refs. AERDL T-1457; RIS E-817. AD-266 656
Order from OTS or SLA $1.10 62-15507

Trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1948, v. 18, no. 8, p. 734-736. Also available from RIS $8.00 as RIS E-817.

DESCRIPTORS: Vacuum furnaces, *Plasma physics, Barium, Strontium, Excitation, Spectrographic analysis.

Line reversal was used to show that the atoms in a high-temperature vacuum oven have an equilibrium distribution over the excited levels. The temperature deduced from the distribution is the same as the measured temperature of the oven wall (within the errors of experiment). It is deduced that the excitation is purely thermal under these conditions. (Author)

Pachner, Jaroslav.
ON THE COMPATIBILITY OF THE FIELD EQUATIONS, CONSERVATION LAWS, AND EQUATIONS OF MOTION IN THE UNITARY FIELD THEORY [1960] 14p. 38 refs.
Order from OTS or SLA $1.60 60-17369

Trans. of Annalen der Physik (East Germany) 1957, ser. 6, v. 20, p. 368-380.

DESCRIPTORS: *Gravity, *Electricity, * Electromagnetic fields, Mass energy relation, Motion, Equations, *Relativity theory, Tensor analysis, Partial differential equations, Differential equations, Differential geometry, Particles.

The problem of choosing the Hamiltonian for the unitary field theory of gravitation and electricity is discussed. Then the compatibility of the field equations is demonstrated. There are 18 equations for 16 unknown components of the nonsymmetric fundamental tensor $g_{\mu\nu}$, from which 4 + 1 + 1 identities are to be deducted, so that only 12 equations remain independent, which agrees exactly with Einstein's postulate of the general covariance of the field equations. From the physical standpoint, the 4 identities express the theorem of the conservation of momentum and energy, while 1 identity expresses the conservation theorem for electric current density, and the last identity the conservation theorem for magnetic flux density. The equations of motion for a probe particle are derived from the principle of variation for the action of a stationary particle and stated explicitly for the case of the Newton-Maxwell approximation and for the case of the motion of a probe particle in a static, spherically symmetric field. (Author)

Schmutzer, Ernest.
MINKOWSKI ELECTRODYNAMICS AS RESULT OF AN INVESTIGATION OF FIELD THEORY. [1960] 7p. 10 refs.
Order from OTS or SLA $1.10 60-17368

Trans. of Annalen der Physik (East Germany) 1957, ser. 6, v. 20, p. 349-354.

DESCRIPTORS: *Electromagnetic fields, Electricity, Dynamics, *Tensor analysis, Energy, Mass energy relation, Density, Spheres, Electric fields, Transformations (Mathematics), Relativity theory.

A general investigation is made of the coupling of the electromagnetic and matter fields as an analog of electrodynamics in media. It is found that only a separation of the two fields in accordance with Minkowski's electrodynamics is meaningful, a minimum of assumptions being employed. No energy tensor having the structure of Abraham's tensor occurs anywhere. This should be a proof on the basis of field theory supporting the Minkowski tensor for micro conditions and hence for macro conditions as well. (Author)

Thermodynamics

Fateev, N. P.
SURFACE SOIL TEMPERATURE MEASUREMENT BY MEANS OF A ZERO-RADIATION METHOD (Izmerenie Temperatury Poverkhnosti Pochvy Radiatsionno-Nulevym Metodom) tr. by Irene A. Donehoo. Oct 61 [8]p. 6 refs.
Order from OTS or SLA $1.10 62-13285

Trans. of Glavnaya Geofizicheskaya Observatoriya, Leningrad. Trudy (USSR) 1960, no. 108(170), p. 59-63.

DESCRIPTORS: *Soils, *Surface temperatures, Measurement, Instrumentation, *Thermodynamics,

A method and a diagram of the instrument for measuring the surface soil temperature by its radiation are presented. The method proposed makes it possible to measure surface soil temperature within an accuracy of 0.1°.

Kiselev, A. V. and Lygin, V. I.
INFRARED SPECTRA AND THE THERMODYNAMIC PROPERTIES OF WATER ADSORBED ON A HYDRATED SILICA SURFACE. [1961] 8p. (19 Eng. refs. omitted) 19 refs.
Order from OTS or SLA $1.10 AEC-tr-4789

Trans. of #Kolloid[nyi] Zhur[nal] (USSR) 1961, v. 23, no. 2, p. 157-162.

DESCRIPTORS: *Silicon compounds, *Dioxides, Surfaces, Water, *Adsorption, *Thermodynamics, *Infrared spectroscopy.

Methods of calculating the entropy of water adsorbed on a hydrated silica surface using certain adsorption complex models and the molecular vibrational frequencies manifested in them in the infrared spectrum, are discussed. The sums of the vibration, rotation and combination entropies, estimated by such a method, are

4 to 7 entropy units which does not exhaust the possible experimental values. Experimental and theoretical methods necessary to develop and perfect the statistical thermodynamic treatment of adsorption complexes have been discussed. (Author)

Wave Propagation

Azbel', M. Ya. and Kaganov, M. I.
ON THE THEORY OF ANOMALOUS SKIN-EFFECT IN A MAGNETIC FIELD [K Teorii Anomal'nogo Skin-Effekta v Magnitnom Pole]. [1961] 6p. 4 refs. MDF A-125.
Order from OTS $0.50 62-11424

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1954, v. 95, no. 1, p. 41-44.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-20215 [1959] 8p.

DESCRIPTORS: *Metals, Conductors, *Surfaces, *Electromagnetic waves, *Propagation, *Electromagnetic wave reflections, *Magnetic fields, Electrons, Electric fields, Alternating current, Energy, Motion, Relaxation time, theory, Polarization, Statistical functions, Differential equations.

Borodich, S. V., Minashin, V. P., and Sokolov, A. V.
LONG-RANGE TROPOSPHERIC PROPAGATION OF ULTRA SHORT WAVES. Apr 61 [5]p. USASIA Trans. Log no. 1151.
Order from OTS or SLA $1.10 62-24794

Trans. of mono. [Radioreleinaya Svyaz'] (Radio-Relay Communications) Moscow, 1960, chap. 5.5.

DESCRIPTORS: *Atmosphere, *Radio waves, *Propagation.

Bugoslavskaya, N. Ya.
SOLAR ACTIVITY AND THE IONOSPHERE. June 62, 56p.
Order from PP $2.50

Trans. of mono. [Solnechnaya Aktivnosti i Ee Vlivanie na Ionosfere, Moscow, 1959].
Another trans. is available from LC or SLA mi$3.60, ph$9.30 as 60-11955, JPRS-5059, 15 July 60 [52]p.

DESCRIPTORS: *Solar energy, Thermal radiation, Ionosphere, *Ionospheric propagation, *Ionospheric disturbances, Earth, Terrestrial magnetism, Magnetic effects, Atmosphere, Ionization, *Radio waves, *Propagation, Radio communication systems, Communication systems.

For abstract see Technical Translations 4: 301, 1960.

Ginzburg, V. L.
THE PROPAGATION OF ELECTROMAGNETIC WAVES IN PLASMAS. Aug 62. approx. 580p.
Order from PP $15.00

Trans. of mono. [Rasprostranenie Elektromagnitnykh Voln v Plazme, Moscow, 1960, 552p.].
Another trans. is available from GB $38.00

DESCRIPTORS: *Plasma (Physics), *Electromagnetic waves, Propagation, *Radio waves, Reflection, Electromagnetic fields, Textbooks, USSR.

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

FIFTEEN YEARS OF SCIENTIFIC PROGRESS. 7 July 61 [46]p. JPRS: 9593.
Order from OTS or SLA $4.60 62-19455

Trans. of Choson Minju Chu'ui Inmin Konghwaguk. Kwahakkwan Tongbo [sic] (Korea) 1960, no. 5, p. 1-25.

DESCRIPTORS: *Scientific organizations, History, *Korea, Scientific personnel, Mathematics, Physics, Astronomy, Biology, Geography, Geology *Agriculture, *Medicine

Contents:
Fifteen years of progress in natural sciences, by Pak Song-uk
Fifteen years of progress in agricultural science, by Kim Han-ju
(Research Methods, Techniques and Equipment,
Fifteen years of progress in medical science, by Han Hak-kun

FROM THE ACTIVITIES OF THE HUNGARIAN ACADEMY OF SCIENCES. 16 Mar 62 [10]p. JPRS: 13013.
Order from OTS or SLA $1.10 62-23633

Partial trans. (some parts summarized) of Magyar Tudomany (Hungary) 1961, v. [6]68, no. 9, p. 551-553.

DESCRIPTORS: *Scientific organizations, Hungary.

INFORMATION FROM EAST GERMAN SCIENTIFIC AND TECHNICAL JOURNALS (1). 11 Jan 62 [41]p. JPRS: 11902.
Order from OTS or SLA $4.60 62-19740

Trans. of excerpts from 1961 issues of East German periodicals Pharmazie, Chemische Technik, Monatsheft für Veterinärmedizin, Angewandte Parasitology, and Deutsche Gesundheitswesen.

DESCRIPTORS: East Germany, Periodicals, *Scientific organizations, *Scientific personnel, *Industrial research, Medicine, Diseases, Pharmacology.

Contents:
Organization and administration of scientific and technical institutions
Biographical information on scientific and technical personalities
(Research Methods, Techniques and Equipment, TT,
Briefs: medical
Report from the Central Association of Pharmacists: summaries, by S. Toelke.

NORWEGIAN PATENT CLAIMS IN ENGLISH TRANSLATION, NOS. 99711-99724. 4 June 62, 14 nos.
Order from AC $1.85/each

DESCRIPTORS: *Patents, *Inventions, *Norway, Memory devices, Ethylenes, Polymerization, Niobium alloys, Titanium alloys, Alloys, Money, Counting methods, Storage, Internal combustion engines, Bolts, Oxalates, Coatings, Oils, Mixtures, Food, Grinders, Feeding, Lignin, Cellulose, Separation, Tractors, Tools.

Contents:
99711 Storage device with several displaceable units; 99712 Method of polymerization (f. ex. of compounds containing at least one etheylene double bond, carried out at low temperatures and at atm. pressure; 99713 Niobium-titanum alloys; 99714 Coin cover for counting and storage of coins (made of transparent plastic); (Research Methods, Techniques and Equipment, 99715 Method for setting of scanning devices relative to recording carriers, which are to be scanned; 99716 Combustion engine with rotating pistons; 99717 Stay bolt (for telegraph poles, etc); 99718 Method for applying oxalate coating to metal surfaces; 99719 Method for manufacture of an oil mixing for margarine; 99720 Method for aromatizing margarine and other food stuffs and stimulants; 99721 Method for extraction of herring meal for manufacture of meal, being particularly deficient in fat; 99722 Device for feeding of logends to grinding apparatus; 99723 Method at extraction of native lignin and semi-chemical substance (semicellulose); 99724 Device in turning claw(tool)on tractor transport of tubes, etc.); 99729 Method for laying of floor covering (water insulating) on ship's deck; 99730 Method for manufacture of pyridylmethylamines; 99731 Method for manufacture of bactericide active 1-alkyl-4-amino quinaldinium salts; 99732 Method for manufacture of 3-amino isoxazoles; 99733 Method for manufacture of new bacteriostatically acting nitrofuran compounds; 99734 Method for manufacture of quinazoline-3-oxides.

NORWEGIAN PATENT CLAIMS IN ENGLISH TRANSLATION, NOS. 99725-99734. 4 June 62, 10 nos.
Order from AC $1.85

DESCRIPTORS: *Patents, *Inventions, *Norway, Boats, Explosives, Processing, Machines, Containers, Magnets, Rolling mills, Deck coverings, Amines, Methyl radicals, Pyridines, Bactericides, Azoles, Nitrogen compounds, Furan derivatives, Quinazolines, Oxides, Production.

Contents:
99725 Device in bottoms of vessels (boats); 99726 Method at and machine for providing plastic substances (explosives) with a (paper, etc.) shell, particularly on multiple band machines; 99727 Device in boxes with cover, and of different sizes, intended (Research Methods, Techniques and Equipment, TT, to be inserted into one another (saving storage space etc.); 99728 Permanent magnetic rolling operation (two oppositely polarized rollers w. parallel axes,

REPORT ON HUNGARIAN STANDARDS AND PATENTS. 17 July 61 [13]p. (figs. omitted). JPRS: 8439.
Order from OTS or SLA $1.60 62-19363

Trans. of Ujitok Lapja [sic] (Hungary) 1961, v. 13, no. 5, p. 13 and 27-29.

DESCRIPTORS: *Standards, *Patents, Weights (Analytical), Hungary, Scientific research, Industrial research.

Contents:
Visit to the Hungarian Bureau of Weights, by Eva Nemes
Publication of patents.

RESOLUTION NO 58/1961 OF THE COUNCIL OF MINISTERS ON THE INTENSIFICATION OF COOPERATION BETWEEN GOVERNMENT ORGANS AND THE CHIEF TECHNICAL ORGANIZATION AS WELL AS ITS AFFILIATED TECHNICAL ASSOCIATIONS. 30 Nov 61 [8]p. JPRS: 11224.
Order from OTS or SLA $1.10 62-19484

Trans. of Przeglad Geodezyjny (Poland) 1961, v. 33, no. 4, p. 125 (insert).

DESCRIPTORS: *Scientific organizations, *Military organizations, Research program administration, *Management engineering, Economics.

Cohen, Francis.
THE REORGANIZATION OF RESEARCH IN THE USSR AND THE PROGRAM OF THE COMMUNIST PARTY. 13 Feb 62 [12]p. JPRS: 12515.
Order from OTS or SLA $1.60 62-19150

Trans. of Collection les Essais de la Nouvelle Critique (France) 1961, Sep/Oct, p. 101-111.

DESCRIPTORS: Science, Communism, *Scientific research, Research program administration.

Ivanov, V. V.
FOREIGN DEVELOPMENTS IN MACHINE TRANSLATION AND INFORMATION PROCESSING, NO. 90. 13 Apr 62 [52]p. 35 refs. JPRS: 13439.
Order from OTS or SLA $5.60 62-23834

Trans. of Konferentsiya po Obrabotke Informatsii, Mashinnomu Perevodu i Avtomaticheskomu Chteniyu Teksta. Doklady (USSR) 1961, no. 10, 29p.

DESCRIPTORS: *Machine translation, *Language, Vocabulary, Synthesis, Analysis, Data, Processing.

The report discusses certain problems which arose during the past six years of working by several groups in the USSR over machine translation. The author concentrates attention on the particular problems of general interest for the specialists in machine translation and scientists engaged in the studies of the fields related to linguistics. (Author)

Ohno, Yoshiro, Tamachi, Tsuneo and others.
MECHANICAL TRANSLATION MACHINE. Foreign Developments in Machine translation and Information Processing no. 24. 22 Mar 61 [35]p. JPRS: 6968.
Order from OTS or SLA $3.60 62-19247

Trans. of Mitsubishi Denki (Japan) 1960, v. 33, no. 8, spec. suppl. on Electronics, p. 1-11.

DESCRIPTORS: *Machine translation, *Digital computers, Computers, Design, Memory devices, Data storage systems, Computer logic, Dictionaries, Coding.

The automatic translation machine under construction at the Mitsubishi Electronics Works was designed to translate automatically with particular attention to the testing of the methods of Professor Tamachi of Kyushu University. The machine, however, is not restricted solely to translating. It is a relatively simple task to design a limited-scale machine used only for translation, in view of the demand for machine useful for other purposes, the present machine was designed to give high performance not only in translating but also in general scientific computing, automatic programming, etc. The automatic machine translation process is discussed with specific reference to the present machine, as well as the logical design of the device.

R., S.
CYBERNETICS INSTITUTE OF THE POLISH ACADEMY OF SCIENCES. 22 Mar 61 [5]p. JPRS: 6969.
Order from OTS or SLA $1.10 62-19298

Trans. of Przeglad Techniczny (Poland) 1960 [v. 81] no. 48, p. 7.

DESCRIPTORS: *Cybernetics, Scientific research, Poland.

Yaryshev, N. A. and Makhnovetskii, A. S.
ERRORS IN THE MEASUREMENT OF TRANSIENT SURFACE TEMPERATURES. 23 Oct 61 [21]p. 7 refs. FTD-TT-61-35; AD-265 800.
Order from OTS or SLA $2.60 62-23380

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii Priborostroenie (USSR) 1960, v. 3, no. 6, p. 100-110.

DESCRIPTORS: *Heat transfer, Temperature, Measurement, Thermometers, *Thermocouples, Errors.

Errors arising in measuring the transient surface temperatures of walls using resistance thermometers are analyzed. Equations are obtained for calculating the errors as a function of the heat-exchange conditions and the thermophysical properties of the gage and the wall. (Author)

Communication Theory

HERALD OF COMMUNICATIONS, 1961, NO. 11[260] 3 Apr 62 [166]p. JPRS: 13299.
Order from OTS or SLA $12.00 62-23805

Trans. of Vestnik Svyazi (USSR) 1961 [v. 21] no. 11[260] including covers.

DESCRIPTORS: *Communication systems, Personnel, Automation, Telegraph systems, High frequency, Radio communication systems, Noise generators, Oscillators, Telephone communication systems, *Communication equipment, Postal services, Transportation.

Contents:
They were awarded the title "Communist-Labor Enterprise"
Communication facilities for the service of building communism
They kept the word given the party, by A. S. Marinich
Development of the communication facilities of Georgia, by G. A. Khristesashvili
How communication workers of Ukraine welcomed the 22nd CPSU Congress, by A. N. Kudinov
Communication workers of Kirgiz SSR are heading for automation, by E. L. Kalyuskii
Telegraphers of Volgograd in the drive for the title "Communist-Labor Enterprise," by N. V. Kotelevskaya
A rayon communications office is a Communist-Labor enterprise, by M. I. Kurbanov
High-frequency communication system over single-quad cables with unattended semiconductor-type repeater stations, by S. A. Adzhemov and others
Noise generator for frequencies of 1-100 MEGC, by E. V. Ryzhkov, E. R. Milyutin, and Yu. V. Markov
Connection of terminal and distant subscribers stations to the APS and ATA offices according to the double-current telegraph system, by A. S. Selivanov
Widening the operating range of the type ZG-12 oscillator, by I. E. Moiseev
Experience of competition for the title "Communist-Labor Enterprise"
Some problems of the installation of telephone facilities in rural areas, by D. A. Ivanov and G. E. Grinberg
Dekatron time-intervals meter DIIV-1, by N. V. Zakharova
For the high quality and dependability of communication equipment, by A. N. Arutyunov
Better postal service should be provided to the

population of the capital, by G. N. Smirnov
Efficiency of the combination of mail and passenger transport, by G. K. Gil' and N. F. Golitsyn
World congress of trade unions
New postage stamps, envelopes and post cards
Providing the delegates to the congress with the services of communication facilities
Millions of televiewers saw the opening of the 22nd CPSU congress
Latest communication equipment.

Cortell, Rene.
SAFETY MEASURES FOR AIR AND SEA NAVIGATION: FREQUENCY CONTROL CCRM (CONTROL CENTER FOR RADIO COMMUNICATIONS AND MOBILE SERVICES). 23 June 59, 7p. JPRS: L-945-D.
Order from OTS or SLA $1.10 59-11560

Trans. of mono. La Securite de la Navigation Maritime et Aérienne; le Controls des Frequences; le C.C.R.M. [Uccle, Brussels].

DESCRIPTORS: *Navigation, Safety, Frequency, Control, *Radio communication systems, Airborne, Shipborne, Mobile, *Air control centers, Radio equipment, *Radio navigation, Belgium.

Photographic Equipment

Derviz, V. D.
INVESTIGATION OF AERIAL FILM FLATNESS IN THE AERIAL CAMERA. 7p. MTWL: 1085.
Order from OTS or ETC $1.55 62-26036

Abstract trans. of Tsentral'nyĭ Nauchno-Issledovatel'skiĭ Institut Geodesii, Aeros"emki i Kartografii. Trudy (USSR) 1957, no. 122, p. 71-98.

DESCRIPTORS: *Aerial cameras, Photographic film, *Optical images, Quality control.

Meyer, Kurt and Lühr, Franz.
THERMAL DEVELOPING. [1961] 7p.
Order from SLA $1.10 62-14211

Trans. of Bild und Ton (Germany) 1958, v. 11, no. 3 [p. 62-63].

DESCRIPTORS: *Photographic film, Photographic paper, *Photographic chemicals, Heating, Chemical reactions, Photographic recording systems.

We report the investigations which have led to the production of Ikotherm paper. (Author)

Serdyukov, V. M.
ON THE APPLICATION OF MULTI-LAYER FILMS FOR CHECKING THE FLATNESS OF THE AERIAL FILM IN THE PLANE (O Primenenii Mnogosloĭnykh Plenok dlya Kontrolya Vyravnivaniya Aerofil'ma v Ploskost'). 5p. MTWL: 1080.
Order from OTS or ETC $$1.40 62-26031

#Trans. of Geodeziya i Kartografiya (USSR) 1960, no. 3, p. 36-39.

DESCRIPTORS: *Aerial cameras, Photographic film, *Optical images, Quality control.

SOCIAL SCIENCES

PROGRESS AND PLANS OF SCIENTIFIC ACADEMY CITY NEAR NOVOSIBIRSK. 5 Jan 61 [3]p. JPRS:6516.
Order from OTS or SLA $1.10 62-19215

Trans. from Muszaki Elet (Hungary) 1960, v. 15, no. 22, p. 11.

DESCRIPTORS: *Scientific organizations, *Housing, Construction, *Urban areas, Transportation.

Baltiiskii, V. A. and Starobinskii, I. M.
CURRICULA OF THE HIGHER MEDICAL SCHOOLS (MED-VUZES OF THE USSR) EFFECTIVE 1 S_P 57. [1962] 62p.
Order from OTS $1.75 62-11161

Trans. of unidentified mono. issued by Ministry of Health, Moscow, 1957.

DESCRIPTORS: *Medical personnel, Medicine, *Education, *Universities, Training.

Kalic, D., Dusan, A., and Radmilo, I.
WORK PLANS AND FINANCING OF INSTITUTES OF HYGIENE. A. WORK PLANS. 17 Nov 61 [5]p. JPRS: 11063.
Order from OTS or SLA $1.10 62-19496

Partial trans. (some parts summarized) of Narodno Zdravlje (Yugoslavia) 1961, v. 17, no. 6, p. 199-205.

DESCRIPTORS: *Public health, Health insurance, Economics.

Pavlov, V. and Yakovchuk, N.
AUTOMATA AND HUMAN LABOR. 28 Feb 62 [19]p. JPRS: 12731.
Order from OTS or SLA $1.60 62-23334

Trans. of Ekonomicheskaya Gazeta (USSR) 1962, no. 2, p. 32-35.

DESCRIPTORS: *Automation, Man, *Labor, Industrial production, Economics, Physiology, Psychology, Human engineering.

Desautel, Louis.
FILE CARD, tr. by F. H. B. 15 Nov 61, 6p. (2 figs. omitted).
Order from OTS or SLA $1.10 62-13491

Trans. of French patent 902,127, gr. 18, cl. 1, appl. 5 Oct 43, granted 27 Nov 44, pub. 20 Aug 45.

DESCRIPTORS: *File cards, Design.

The invention relates to a device in which the upper edge of the file card is provided with successive alphabetic (or numerical) scales whose number equals the number of divisions and subdivisions to be shown and on each scale a mark visible on the edge of the card at the right hand of each first letter of the word indicating the division or subdivision concerned (or of the first numerals of the number indicating it) is provided. These marks are such that on each scale at the very least the one corresponding to the first letter (or first numeral), is distinguishable from others. (Extract)

Kogan, Kh. M.
THE USE OF BULL PUNCH CARD MACHINES TO COMPILE ISSUE-BY-ISSUE AND ANNUAL INDEXES TO ABSTRACT JOURNALS. Foreign Developments in Machine Translation and Information Processing, no. 86, 30 Mar 62 [24]p. JPRS: 13253.
Order from OTS or SLA $2.60 62-23647

Trans. of Konferentsiya po Obrabotke Informatsii, Mashinnomu Perevodu i Avtomaticheskomu Chteniyu Teksta. Doklady (USSR) 1961, no. 7, 14p.

DESCRIPTORS: Abstracting, Periodicals, *Indexes, Preparation, *Punched cards methods, *Documentation.

BOOK REVIEWS

The following book reviews can be ordered by number from OTS or SLA for $1.10 each. Each review includes, in addition to the material shown, a detailed statement of the coverage of the book and detailed table of contents.

BR-SOV/5762
Korotkov, Vladimir Petrovich, and B.A. Tayts
FUNDAMENTALS OF METROLOGY AND ACCURACY OF INSTRUMENT MECHANISMS (Osnovy metrologii i tochnosti mekhanizmov priborov) Moscow, Mashgiz, 1961. 400 p. Errata slip inserted. 12, 000 copies printed.

BR-SOV/5768
Lur'ye, Anatoliy Isaakovich
ANALYTICAL MECHANICS (Analiticheskaya mekhanika) Moscow, Fizmatigiz, 1961. 824 p. 18,000 copies printed.

BR-SOV/5844
Shumskiy, K.P.
VACUUM CONDENSERS IN THE CHEMICAL-MACHINE INDUSTRY (Vakuumnyye kondensatory khimicheskogo mashinostroyeniya)Moscow, Mashgiz, 1961. 334 p. Errata slip inserted. 6500 copies printed.

BR-SOV/5848
Mironov, Konstantin Andreyevich, and L.I. Shipetin
AUTOMATIC CONTROLLERS; REFERENCE MATERIALS (Avtomaticheskiye regulyatory; spravochnyye materialy) 2d rev. and enl. ed. Moscow, Mashgiz, 1961. 551 p. 25,000 copies printed.

BR-SOV/5851
Bazant, V., and others (State Prize Winners)
SILICONS: ORGANOSILICON COMPOUNDS, THEIR PRODUCTION, PROPERTIES, AND APPLICATION (Silikony: kremniyorganicheskiye soyedineniya, ikh polucheniye, svoystva i primeneniye) Moscow, Goskhimizdat, 1960. 709 p. Errata slip inserted. 4000 copies printed.

BR-SOV/5855
Kibardin, Yu. A., and others
ATLAS OF GAS DYNAMIC FUNCTIONS FOR HIGH AIR-FLOW SPEED AND HIGH TEMPERATURE (Atlas gazodinamicheskikh funktsiy pri bol'shikh skorostyakh i vysokikh temperaturakh vozdushnogo potpka)Moscow, Gosenergoizdat. 1961. 327 p. Errata slip inserted. 6000 copies printed.

BR-SOV/5856
Leonov, Yuriy Petrovich, and others
AID IN AUTOMATION: STATISTICAL DYNAMIC IN AUTOMATION (Pomoshchnik avtomatiki; statisticheskaya dinamika v avtomatike) Moscow, Izd-vo AN SSSR, 1961. 116 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya). 8000 copies printed.

BR-SOV/5857
Katsnel'son, Matvey Yefimovich
ELECTRICAL EQUIPMENT AND THE AUTOMATION OF PIPE-PRODUCING PLANTS (Elektrooborudovaniye i avtomatizatsiya truboprokatnykh zavodov) Moscow, Metallurgizdat, 1961. 400 p. Errata slip inserted. 3750 copies printed.

BR-SOV/5858
Romanov, Vsevolod Vladimirovich
CORROSION OF MAGNESIUM (Korroziya magniya) Moscow, Izd-vo AN SSSR, 1961. 66p. 2700 copies printed.

BR-SOV/5860
AEROLOGICAL METHODS OF INVESTIGATING THE ATMOSPHERIC BOUNDARY LAYER (Metody aerologicheskikh issledovaniy pogranichnogo sloya atmosfery) Leningrad, Gidrometeoizdat, 1961. 221 p. 1500 copies printed.

BR-SOV/ 5861
Gorbatsevich, Aleksandr Feliksovich, and others
AUTOMATIC BROACHING LINES AND AUTOMATION IN BROACHING (Avtomaticheskiye linii iz protyazhnykh stankov i avtomatizatsiya protyagivaniya) Minsk, Gosizdat BSSR, 1961. 110 p. 1500 copies printed.

BR-SOV/5862
Vysotskiy, A.V., and others
INSTRUMENTS AND EQUIPMENT FOR THE ACTIVE CONTROL OF DIMENSIONS IN MACHINE BUILDING (Pribory i ustroystva dlya aktivnogo knotrolya razmerov v mashinostroyenii) Moscow, Mashgiz, 1961. 303p. (Series: Progressivnyye sredstva kontrolya razmerov v mashinostroyenii) Errata slip inserted. 7000 copies printed.

BR-SOV/5863
German, Avraam L'vovich, and Boris, A.V.
INSTALLATION AND OPERATION OF ROTARY AND CENTRIFUGAL PUMPS (Montazh i ekspluatatsiya lopastnykh nasosov) Moscow, Mashgiz, 1961. 179 p. 12,000 copies printed.

BR-SOV/5864
Mozniker, Riva Abramovna
STUDY OF VIBRATION-TESTING UNITS WITH ELECTROMAGNETIC EXCITERS (Doslidzhennya vibratsiynykh vyprobuval'nykh ustanovol z elektromagnitnymy zbudnykamy) Kyyiv, Vyd-vo AN UkrRSR, 1960. 174 p. 1000 copies printed.

BR-SOV/5865
Zegzhda, V.P., and others
HANDBOOK OF REFRACTORY PRODUCTS, MATERIALS AND RAW MATERIALS. COMPILED ACCORDING TO STATE STANDARDS AND TECHNICAL SPECIFICATIONS (Spravochnik na ogneupornyye izdeliya, materialy i syr'ye. Sostavlen po gosudarstvennym standartam i tekhnicheskim usloviyam) 2d ed. rev. and enl. Moscow. Metallurgizdat, 1961. 338 p. Errata slip inserted. 12,500 copies printed.

BR-SOV/5866
Gitis, Emanuil Isaakovich
INFORMATION CONVERTERS FOR ELECTRONIC DIGITAL COMPUTERS (Preobrazovateli informatsii dlya elektronnykh tsifrovykh vychislitel'nykh ustroystv) Moscow, Gosenergoizdat, 1961. 375p. 15,000 copies printed.

BR-SOV/5867
Khokhlov, Vikentiy Alekseyevich
HYDRAULIC POWER AMPLIFIERS (Gidravlicheskiye usiliteli moshchnosti) Moscow, Izd-vo AN SSSR, 1961. 100 p. 5200 copies printed.

BR-SOV/5868
Livshits, N.N.
EFFECT OF IONIZING RADIATION ON THE FUNCTIONS OF THE CENTRAL NERVOUS SYSTEM (Vl'yaniye ioniziruyushchikh izlucheniy na funktsii tsentral'noy nervoy sistemy) Moscow, Izd-vo AN SSSR, 1961. 179p. Errata printed on the inside of back cover. 3500 copies printed.

BR-CZECH/ 5870
Blaha, Karel, Engineer, Doctor
PREPARATION REACTIONS IN ORGANIC CHEMISTRY. V.6: REACTIONS OF ORGANOMETALLIC REAGENTS. (Preparativni reakce v organicke chemii. Dil 6: Reakce organokovovych cinidel) Prague, Nakl. Ceskoslovenske akademie ved, 1961. 954 p. 1300 copies printed.

BR-SOV/5871
Kiselev, Boris Abramovich
FIBERGLASS-REINFORCED PLASTIC (Stekloplastiki) Moscow, Goskhimizdat, 1961. 15,000 copies printed.

BR-SOV/5872
Komarov, S.G. Doctor of Technical Sciences, ed.
THE GEOPHYSICIST'S HANDBOOK, IN FOUR VOLUMNES, V.2: GEOPHYSICAL METHODS IN THE EXPLORATION OF WELLS (Spravochnik geofizika, v chetyrekh tomakh. t. 2: Geofizicheskiye metody issledovaniya skvazhin) Moscow, Gostoptekhizdat, 1961. 760 p. Errata slip inserted. 6130 copies printed.

BR-SOV/5874
Geller, Yuliy Aleksandrovich
TOOL STEELS (Instrumental'nyye stali) 2d ed., rev. Moscow, Metallurgizdat, 1961. 510 p. Errata slip inserted. 9300 copies printed.

BR-SOV/5878
Nikitin, Yu. M.
DESIGNING COMPONENT PARTS AND SUBASSEMBLIES FOR AIRCRAFT ENGINES (Konstruirovaniye elementov detaley i uzlov aviatsionnykh dvigateley) Moscow, Oborongiz, 1961. 288 p. Errata slip inserted. 9000 copies printed.

BR-SOV/5885
Akademiya nauk SSSR. Institut merzlotovedeniya
FIELD STUDIES; METHODOLOGICAL HANDBOOK (Polevyye geokriologicheskiye (merzlotnyye) issledovaniya; metodicheskoye rukovodstvo (Geocryological [Permafrost] Moscow, Izd-vo AN SSSR, 1961. 422 p. Errata slip inserted. 1500 copies printed.

BR-SOV/5887
Gutovskiy, Mikhail Vasil'yevich
MANUAL ON THE DESIGNING AND CALCULATION OF AIRCRAFT ELECTRICAL-EQUIPMENT ELEMENTS AND SYSTEMS. NO. 1: AIRCRAFT POWER-SUPPLY NETWORKS (Posobiye po proyektirovaniyu i raschetu elementov i sistem aviatsionnogo elektrooborudovaniya. vyp. 1: Samoletnyye elektroseti) Moscow, Oborongiz, 1961. 136 p. 6000 copies printed.

BR-SOV/5889
Hudlicky', Milos
THE CHEMISTRY OF ORGANIC FLUORINE COMPOUNDS (Khimiya organicheskikh soyedineniy ftora) Moscow, Goskhimizdat, 1961. 372 p. Errata slip inserted. 6500 copies printed.

BR-SOV/5897
Sakharov, G.I., and others
HEATING OF BODIES AT HIGH SUPERSONIC SPEEDS (Nagrev tel pri dvizhenii s bol'shimi sverkhzvukovymi skorostyami) Moscow, Oborongiz, 1961. 105 p. Errata slip inserted. 4800 copies printed.

BR-SOV/5909
Kudryavtsev, Yevgeniy Vasil'yevich, and others
NONSTATIONARY HEAT EXCHANGE (Nestatsionarnyy teploobmen) Moscow, Izd-vo AM SSSR, 1961. 156 p. Errata printed on the inside of back cover. 2500 copies printed.

BR-GER/5943
Beier, Walter, and Dorner, Erich
PROBLEMS OF SPACEFLIGHT MEDICINE (Probleme der Raumflugmedizin) Leipzig, VEB Georg Thieme, 1961. 124 p.

TRANSLATIONS IN PROCESS

THE ALBUM OF AERIAL PHOTOGRAPHS OF ICE FORMATIONS ON THE SEAS.
Mono. Al'bom Aerotosnimkov Ledovykh Obrazovanii na Moryakh, Leningrad, 1960.

APPLICATIONS OF THE ULTRASONIC PROGRESSIVE WAVE ANTENNAS.
Mono. Compagnie Generale de Telegraphie Sans Fil., Document no. 1914.R.S., C.S.F./D.P.A., SL/DC, Paris, 15 June 61.

DEMOCRATIZATION OF NATIONAL DEVELOPMENT.
Indonesian mono. Pendemokrasian Nasional, 1961, p. 3-66.

SPECIFICATION: ELECTRONIC COMPONENT PARTS; TEST METHODS.
Mono. Specification: Compsants Electroniques, proj. CCTU ol-olA, July 61.

Bardizh, V.V..
STATIC AND DYNAMIC PROPERTIES OF FERRITE CORES WITH RECTANGULAR HYSTERESIS LOOPS AND METHODS OF MEASURING THEM.
Russian mono. Magnitnye Elementy Ustroistv Vycheslitel'noi Tekhniki, Sbornik Statei, 1961. p. 3-30.

Berg, A.I., ed.
CYBERNETICS AT THE SERVICE OF COMMUNISM (A COLLECTION OF ARTICLES).
Russian mono. Kibernetiku na Sluzhbu Kommunizmu (Sbornik Statei) 1961, p. 1-32, 312.

Bodner, V.A. and Kozlov, M.S.
THE STABILIZATION OF AIRCRAFT AND AUTOPILOTS.
Mono. Stabilizatsiya Letatel'nykh Apparatov i Avtopiloty, Moscow, 1961, 508 p.

Cherednichenko, V.I.
ROLE OF SOLAR CORPUSCULAR AND PHONTON RADIATION IN THE FLARES OF BRILLIANCY IN COMETS.
8 Feb 62.
Glavnaya Astronomicheskaya Observatoriya, Kiev. Izvestiya (USSR) 1960, v. 1, p. 94-104.

Ganulich, A.K.
ELECTRONIC MODELING DEVICES.
Russian mono. Elektronnye Modeliruyushchie Ustrostva, 1961, p. 2-78.

Gel'fand, I.M. and Shilov, G.E
GENERALIZED FUNCTIONS AND OPERATIONS OF THEM.
Russian mono. Obobschenye Funktsii i deistviya nad nimi, 2nd ed., Moscow, 1959. 470 p.
To be published by Academic Press, Inc. after Spring, 1963.

Gimmel'farba, A.L.
METHODS OF APPROXIMATE CALCULATION AND SELECTION OF PARAMETERS FOR THE DESIGN OF AIRCRAFT (Metody Priblizhennykh Raschetov i Vybora Parametrov pri Proektirovanii Samoletov).
Aviatsionnyi Institut, Moscow. Trudy (USSR) 1961, v. 138, 100 p.

Ioffe, A.F.
SEMICONDUCTOR THERMOELEMENTS. CHAP. IV: EXAMPLES OF THERMOELECTRIC DEVICES.
Mono. Poluprovodnikovye Termoelementy, Moscow, 1960, chap. 4, p. 126-153.

Jara, Ricardo Lopez
DISEASES OF THE URACHUS.
Re[vista de] Sanid[ad] Milit [ar] (Mexico) 1961, v. 14, Sep, p. 7-39.

Lowenthal, S. and Tournois, P.
IMPEDENCES OF BEAMING OF BANDS AND PLATES: THEIR ACOUSTIC RELATION TO THE MEDIUM OF PROPAGATION.
Mono. Compagnie Generale de Telegraphie Sans Fil., Document no. 2108. R.S., C.S.F./D.P.A., SL/DC, Paris, 19 Feb 62.

Mandel'shtam, S.L.
INVESTIGATION OF THE X-RAY RADIATION FROM THE SUN [AND] RADIO ELECTRONIC EQUIPMENT.
Mono. issued as Rept. A-133 of Spektral'naya Labortoriya Fizicheskii Inst. im. P.N. Lebedeva, Akademiya Nauk SSSR, n.d.

Mandel'shtam, S.L. and Voron'ko, Yu. K.
INVESTIGATION OF X-RAY FROM THE SUN DURING THE TOTAL SOLAR ECLIPSE ON 15 FEB 61.
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